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THE LANCET.

MDCCCXXIII.—IV.

VOL. I.—II.

EDITED BY

THOMAS WAKLEY,

SURGEON.

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THE LANCET.

SURGICAL LECTURES.

Theatre, St. Thomas's Hospital, Wednesday Evening, October 1, 1823.

At half-past seven this theatre was crowded in every part, upwards of four hundred students of the most respectable appearance being present.

About eight o'clock, Sir Astley Cooper arrived, and was received with the most enthusiastic applause; which having ceased, this distinguished surgeon commenced his discourse by observing,—That, while it is the province of the physician to attend to internal diseases, it is the duty of the Surgeon to attend to those that are external; to perform operations for the removal of diseased parts; and to know how to regulate the system by the use of medicine, when local diseases are produced by constitutional derangement. Surgery is usually divided into the principles and practice. The first are learned from observations on the living when diseased, by dissection of the dead. and by experiments upon living animals. Our deductions from these sources furnish us with the means of knowing a malady by its symptoms, the alteration of structure in a part when diseased, and the various ways in which *Nature* attempts the reparative process, both in external and internal parts. A man who has seen much of morbid preparations, possesses great advantages; but his anatomical knowledge cannot be perfect unless he has frequently seen and assisted in the dissection of the human body. In the surgical science hypothesis should be entirely discarded, and sound theory, derived from actual observation and experience,

alone encouraged. The first is an ignis fatuus which is sure to mislead; the last a polar star, a never-failing guide. Experiments on living animals have been found of the greatest utility in directing us to a knowledge of the means by which Nature acts in the reparation of injuries, and in the restoration of lost parts. Thus the method she would adopt in uniting a fracture in the bone of a dog, will show you the manner in which union of a fractured bone would be effected in man; the secretion of ossific matter by the blood-vessels being in each case precisely the same.

In the *practice* of Surgery, also, many essential qualities are requisite on the part of the surgeon. The first of which is, neatness in the application of his remedies; awkwardness in this respect will frequently injure his professional prospects—the patient and his friends often judge of a man's skill by his manner of bleeding, or from the application of a bandage; and it sometimes happens that "the hand spoils the head."

The next requisite is, gentleness of manner; patients having a natural dislike to operations, feel still more uneasy if they discover any thing in their practitioner's behaviour which makes them apprehend rough treatment.

Violence is in all cases bad, and is sometimes followed by fatal consequences.

I was invited by a Surgeon, some years since, to see a patient who had a compound dislocation of the ancle joint: there existed a considerable degree of pain and inflammation; the surgeon at once suddenly introduced a probe, raised some of the parts by it, and his Latin being as bad as his surgery, said with the utmost coolness, *Dedenda est Carthago!* (a loud laugh) "Carthage must fall!" Thereby implying that amputation must be performed; indeed, from the rough manner in which he treated his patient, there seemed no other chance for the poor fellow's recovery. In this case gentleness might have prevented the necessity for amputation.

But the quality which is considered of the highest order in surgical operations, is self-possession; the head must always direct the hand, otherwise the operator is unfit to discover an effectual remedy for the unforeseen accidents which may occur in his practice. Without this quality a man may do well enough in ordinary cases, but

can do little on sudden emergencies; it inspires confidence, and almost ensures the success of the operation. These qualities forward the interests of professional men, whilst they diminish the sufferings of human nature. Patients generally form an opinion of a surgeon's ability by his manner: if he be of a dry, morose turn, he is apt to alarm not only the patient, but his whole family; whereas, he who speaks kindly to them, and asks for particular information, is supposed to have more knowledge, and receives more respect.

In all cases it is the duty of the Surgeon, never to advise an operation, unless there is a probability that it will be attended with success: he should here, as in every instance, "do to others as he would have others do unto him." Let it be always remembered, that operations cannot be *safely* undertaken by any man, unless he possess a thorough knowledge of anatomy. This is the real groundwork of all Surgical science; and it has ever been found that half-anatomists are bungling practitioners; ignorance here, as it always will, gives confidence without power. But it is consolatory to know, that the human frame is better understood at the present epoch by *Students*, than it was forty years ago by *Professors*. With us, the march of improvement has been most rapid; and it has principally arisen from the assiduity with which the modern Surgeons have pursued their avocations in the dissecting-room. A few years since, all operations were attended with hazard; those now undertaken commonly do well, which can only be explained by our increased information. An old surgeon, now deceased, said. "that operations for extracting stones from the bladder, put him in mind of sailing between Scylla and Charybdis." It was replied, "that not to attempt them was certainly resigning his patients to Scylla!" 'Tis true, these operations require the most perfect anatomical skill; as do those for hernia, aneurism, and fractures of the bones of the head, attended with depression. Anatomy likewise teaches us how to discriminate disease; in which lies more than half the cure. Without this knowledge, dislocations frequently cannot be detected; whereby patients may become miserable for life, and thus the reputation of the Surgeon be for ever lost. Some years since, one of the profession, whom I had long known, but had not seen for many years,

called on me; I naturally inquired respecting his success. He replied, that his life had been like April, sometimes sunshine, sometimes rain. I rejoined, "How so? you have brought up a family genteelly, and have, I understand, a respectable practice."—"True, (said he,) but a circumstance occurred some time ago which has given me much uneasiness; I was called to attend a case of dislocation of the shoulder joint, but it so happened that I could not discover it; after attending the patient for a considerable time, another surgeon was requested to see him, who at once pronounced the bone to be out, which in reality was the case, for in a very short time he reduced it. When the man recovered, he brought an action against me, I had to pay two hundred pounds damages, and the law expenses were two hundred pounds more. The loss of the money I did not feel, but I have severely felt being pointed at as an ignorant man."

A few years ago, one of the dressers in this hospital wished very much to perform an operation; and he turned his attention to the surgery boy, who had a bad leg, and said to him one day, "Abraham, I should like to cut off your leg."—"Indeed!" said Abraham, "I should not like it."—"Oh," said the dresser, "it will never be of any use to you in its present state, and therefore you had better be without it. I will take a lodging for you; I will give you some money, and you shall be well attended." The boy's scruples were overcome; he took the money, went to the lodging; all was fixed, and the operator began; but finding a great discharge of blood, he cried out to his assistant—"Screw the tourniquet tighter." He obeyed; but in doing so the screw broke, and at this unforeseen accident, the dresser lost all presence of mind; he jumped about the room, then ran to the sufferer. and endeavoured to stop the effusion of blood by compressing the wound with his hand. but in vain; his sleeve became filled with blood, and poor Abraham would have died in a very short time, had not a pupil accidentally called, who had the presence of mind to apply the key of the door to the femoral artery, by compressing which he stopped the bleeding, and thus gained time for the application of another tourniquet.

Some years ago, one of the dressers at Guy's Hospital, in bleeding a man, punctured the artery that lay under the vein

(a situation in which he ought not to have bled), and before the blood could be stopped, the person lost thirty-seven ounces. One of the surgeons cut down upon the artery at the elbow, and secured it. In doing this, he divided the principal veins; inflammation and mortification came on, and death soon followed.

I bring forward these examples to impress upon your minds that an imperative necessity exists for making yourselves well acquainted with anatomical science; without which you cannot conscientiously discharge your duty to society; and it is upon this that you must lay the foundation for your future advancement.

The parts of the body most essential to be particularly studied are, the brain, bones, arteries, veins, nerves, and joints. To each of these you must pay particular attention, and make yourselves well acquainted with its form, situation, and functions; otherwise you will only be exposed to ridicule, and perhaps worse, if, in your practice, you should be ignorant of the nature of these structures. You should know the nature of the human machine well, or how can you pretend to repair it? If you have a watch injured, you will not give it to a tinker to repair—you will get the best watchmaker you can to set it right. How, then, can it be supposed, that the finest and most perfect organization we know of, when out of order, should be consigned to the hands of unlearned persons? Mistakes of this kind do, it is true, sometimes happen, but much less often now than formerly.

When you dissect, do not attack all the parts of the body at once. The best plan is, to take the portion that you are examining to your room, and keep it fresh by plunging it into alcohol. Inspect it with care, and note down your observations. By these means, a head will occupy your time for five or six weeks very advantageously.

Physiological knowledge is of the utmost importance to the profession of Surgery: this gives you a knowledge of the healthy functions, and thus enables you better to understand the nature of diseased action. This was the rock on which Hunter stood, admired by the wise, and abused by the ignorant; indefatigable in his research, he omitted no opportunity of exploding false theories, and substituting true

ones founded on facts established by experiments. But it is said that he was a man of great genius: I do not think so; or, if he were, he owed it to his uncommon industry and assiduity. He was the last in the laboratory or study at night, and the first there in the morning, allowing himself very little time for repose. It was in this way he collected and arranged that Museum which will endure as long as any thing of the kind—the admiration of foreigners, as well as of our own countrymen. But we are still more indebted to him for the true principles of our science, which he displayed to us with a masterly hand. In this free country the same way is open to all who choose to take it, who prefer honourable and laborious exertion to idle habits, which ensure ignorance, and, finally, disgrace.

The study of medicine is important to the surgeon: he should be able to prescribe with certainty—should well understand the great influence of local disease on the constitution, as well as the *origin* of local disease from constitutional derangement. Without such knowledge, he knows but half his duty. On the other hand, a mere physician cannot be a good judge of surgical cases; and, notwithstanding my respect for the Physicians of Guy's Hospital, I would not hold my situation in that establishment, unless I had the right of prescribing for my surgical patients. I had, in one of these hospitals, a man under my care for a compound fracture, and had great hopes of saving the patient, as he was doing well; but a physician, whilst going through the ward, visited him, and ordered a cathartic, which, acting rather violently, disturbed him so much, that fatal consequences ensued. That a physician should not interfere with patients of this description is therefore evident; but I do not mean to say that one profession is to be upheld at the expense of the other: far from it, indeed they should mutually assist in the great duty of preserving human existence.

Reading will be found extremely useful, when it is select; but I would not recommend works to young students which lay down *systems* for their guidance; such a plan of reading is bad. It is better to read the detached works on particular diseases. To the pupils generally, but more particularly to those who are allowed to pass in this metropolis but one or two seasons in at-

tending the different hospitals, I strongly recommend punctuality in their attendance at lectures, and at the dissections and hospital practice. In St. Thomas's Hospital alone, you have an opportunity of seeing above 800 in-door, and a vast number of out-door patients, whose cases are equally useful as interesting to students. I caution the pupils from speaking unguardedly before the patients: it can do no good to let them know what is intended for their cure, which it very often prevents. Some time ago, a man came into Guy's Hospital, having a disease that required an operation, and by no means a dangerous one. A pupil, when conversing with him, asked him where he came from: the man replied, "From Cornwall." "O did you?" said the pupil; "Well, I can tell you, you will never see Cornwall again." The patient became alarmed, and immediately left the hospital.

I recommend to you, also, the practice of taking notes, but not hasty ones, as they do more harm than service, by causing one term to be mistaken for another.

I am happy to bear witness to the great improvement which has taken place, of late years, in the education of those who are coming forward in the various classes of medical pupils: this I consider a most essential advantage, as it tends, more than any other circumstance, to raise the character of the profession to its proper station. To the Company of Apothecaries society is much indebted, as to them we owe the Act which makes a certain course of education indispensable to medical students. In the metropolis, surgeons, of course, are highly respected, but not equally so in the country, for there the practitioner is obliged to inspect the preparation of his medicines, and, necessarily, must be often in his shop. But general education, so essential to our profession in particular, is making rapid and desirable advances, whilst ignorance flies fast before it.

I particularly request the young pupils, whose friends have at great expense prepared them for an honourable and lucrative profession, not to lose their precious time in idle and vain amusements; and while they have those opportunities which our hospitals afford, to keep their attention steadily fixed on the various branches of science which are essential to a knowledge of surgery, and not suffer themselves to be led

away from the true path to eminence by the idle and unthinking: for, I ask them, how they can, on their return home, look their friends in the face, if they have neglected their duties? But, on the other hand, should they conduct themselves with good sense, and apply with diligence to their studies, they will receive their just reward.

I have probably known ten thousand members of the faculty in the course of my professional life, to whose partiality I attribute my successful progress, more than to any merit of my own; and I should be wanting in gratitude if I did not acknowledge it. I have observed that well-directed assiduity will surmount all difficulties: you should not be deterred in your efforts, even by poverty, for it is a great stimulus to exertion, and to regularity of life; all however will not be equally studious, for some will be fluttering in the boxes of another theatre, or come here only to interrupt their more steady fellow-students. But I will not suffer it as long as I have the honour of lecturing in this establishment: no man shall interrupt another with impunity. Perhaps some who are fashionably dressed may think proper to look down with a feeling of contempt upon the students whose attire is plain and more modest; but should such a feeling exist, I would advise such persons to pause a while, and consider what it is that makes one man superior to another in this profession. When they commence their career of public life, the plain, industrious, intelligent young man goes slowly but steadily in the right track of his profession, and rises to respectability, perhaps even to a high rank; on the other hand, the fashionable lounger, who neglects to improve himself, finds his want of knowledge and his bad habits equally retard him: instead of rising, he sinks lower; his friends disappear, and at last he falls into obscurity, reduced to a pitiable state, blaming and abusing his more fortunate rival. In conclusion, let me say, that if any of you wish to ask my advice or assistance in any way, I shall be most happy if you will call on me whenever you think proper. I do not say this from ostentation, but always wish to show the junior members of the profession that I do not forget the friendship I have experienced from their fathers.

At the conclusion of the Lec-

ture, there was enthusiastic applause.

Remarks by HENRY EARLE, *Esq. &c., on Sir* ASTLEY COOPER'S *Reply to his Critical Observations on Fractures of the Neck of the Thigh-bone, &c. &c.*

I BEG leave, through the medium of your highly respectable Journal, to correct an inaccuracy in a critical work which I lately published on Fractures of the neck of the Femur. At page 41, in alluding to a preparation, contained in Mr. Langstaff's museum, of a case of double fracture within and external to the capsule, I have stated that "firm ligamento-cartilaginous union had taken place." Mr. Langstaff has obligingly corrected the error into which I had fallen, and, with his usual liberality, has afforded me another opportunity of examining the preparation alluded to, which I find to be very accurately described by Sir Astley Cooper. On the former occasion when I visited his collection, I had not the benefit of Mr. Langstaff's attendance to explain the individual specimens; and from the short notes which I then made, it is very clear that I must have mistaken the preparation in question. I consider this declaration due to Sir Astley and myself, and shall be much obliged by your giving early publicity to it. At the same time, I beg to observe, that the absence of union in this case does not in the slightest degree invalidate the reasoning which I have employed, and that I still consider that the fracture within the articulation would prevent the motions of the pelvis from being communicated to the fracture external to the capsule; and, consequently, that no comparison can be drawn between the two fractures, as the one within the articulation would be liable to participate in every motion of the trunk and pelvis, while that external to the capsule, from the very circumstance of the double fracture, would be in great measure secured from any such interruptions to bony union. Added to which, it is right to observe, that the central portion between the two fractures, being nearly insulated, would be placed under much less favourable circumstances for union than when connected with the shaft of the bone. These two facts are fully sufficient to account for the want of those reparative effects which commonly take place in simple cases of

fracture within the articulation.

I have the honour to be, &c.,

HENRY EARLE.

P.S. Since the above letter was written, I have had an opportunity of reading Sir Astley Cooper's Reply to my Observations, in an Appendix to his third edition; and as that work contains many heavy charges against me, it is incumbent on me to endeavour to repel them.

In the first place, I am charged with an attack on the honour and credit of Guy's Hospital. To this I offer my most unqualified disavowal of any such intention, or of the slightest inimical feeling towards any individual connected with it. No impartial person can possibly draw such an inference from any part of my work; unless, indeed, Sir Astley Cooper has so entirely identified himself with that noble institution, that to differ from him in opinion can be construed into an attack upon the whole school. No petty motives of rivalship influenced me in taking the steps which I have followed, but a conscientious feeling that an advocate for the possibility of union within the articulation was imperiously called for. If I had wished to have contrasted one school with the other, I might have strengthened my cause by stating, that the doctrines which I have inculcated are entertained by most of the able associates with whom I am connected, and are taught by the eloquent and highly-gifted Professor who has so long been an ornament and support to St. Bartholomew's.

I am next charged with misleading the rising generation with incorrect surgical principles; and Sir Astley is led to exclaim, "Good God! is this written by an English Surgeon?" It is even so, and by one who hopes to have some claim to that honourable title, should he succeed in restraining the rough and useless freedom of examination which he has too often witnessed in these cases, and in establishing in its room a train of more rational and less injurious and diagnostic symptoms, sufficiently clear to direct the judgment of any one competent to the practice of his profession.

To the charge of misrepresentation, at page 22, I distinctly plead not guilty, and feel confident of a verdict in my favour. Sir Astley Cooper, at page 146 of his large work, lays down certain rules respecting fractures external to the capsule, to which he admits

that there are exceptions; then follow three cases in proof of the positions laid down, but, unfortunately, so far from illustrating, they are all in direct opposition to them. When this inconsistency is pointed out, Sir Astley Cooper charges me with misrepresentation, and wishes the cases in question to be considered as illustrative of the exceptions to his rules; and so, indeed, in the next edition, with some trifling alterations and additions, they may be made to appear; but as they at present stand in the first and second editions, there cannot be any reasonable doubt of their bearing the interpretation which has been put upon them by many other persons as well as myself. If Sir Astley Cooper really intended them as exceptions to his general rules, he should have stated so more clearly and intelligibly; but surely no critic can be fairly chargeable with misrepresentation in consequence of the author's want of sufficient perspicuity. With much greater justice I might complain of the allusion which has been made to the case of fractured olecranon, at p. 15, as unfairly and partially quoted. In relating that case, I openly and candidly avowed the mistake under which I laboured, with a view to caution others from falling into the same error, by following too implicitly the doctrines of the schools, and I have clearly proved that, in the case in question, not one of the symptoms existed, which are described by Sir Astley Cooper and other systematic writers. It is not my intention at present to answer the various parts of this Appendix in detail; but having rebutted the several charges which have been brought against me, I shall beg leave to notice a few passages in the Appendix, which might lead to a misunderstanding of my work. With respect to the case of Spilling, mentioned at p. 14, I had nothing to do with the treatment of him, and believe that but little was done to restore the limb, because it was evident that the patient was dying of a disease in the liver.

The preparation in the College Museum, alluded to at p. 21, I value so little, that I have not even mentioned it in my work. It was taken from a patient who was burnt to death; and I could learn nothing respecting it, but that she was supposed to have dislocated her thigh, which was never properly restored. With respect to the case of shortening to the extent of four inches,

mentioned at p. 16, I have only to observe, that the question at issue is respecting the degree of shortening immediately consequent to the accident. I have myself expressly stated, at p. 43, "that in old neglected cases, where no union has taken place, there will often be very considerable shortening in consequence of the absorption of the neck within the articulation:" precisely such is the case in the preparation in question; but surely this cannot be gravely brought forward in proof of the degree of shortening immediately after the accident. Sir Astley has employed the man's high-heeled shoe as a gauge; but this is very fallacious, as the direction of the whole thigh would be altered, and the knee would be slightly bent, which would increase the apparent degree of shortening, even supposing the actual shortening not to exceed two inches and a half; not to mention that some allowance should be made for the thickness of the other shoe.

At p. 7, Sir Astley has said, that "no argument can ever settle the question of the possibility of union, which can only be decided by observation." This is undoubtedly true; but it is equally so, that *the question can never be decided in the affirmative by following the doctrines which he has inculcated, as the practice Sir Astley recommends and follows, renders union by bone a moral impossibility.* By reasoning, however, I hope that I have shown that there is no actual law in the animal economy prohibiting such union. By reasoning, I have endeavoured to explain the causes which have hitherto contributed to interrupt bony union; and by reasoning, I hope to induce my professional brethren not to abandon these cases as hopeless.

I am well aware that my work is deficient in positive evidence, but I trust that I have assigned satisfactory reasons for the results having been hitherto so generally unsuccessful. If there had existed more positive evidence on this disputed question, the doubts at present entertained could not possibly have been maintained by any person, and my humble pen would not have been required in support of the possibility of union. The present inquiry will, I hope, lead to the solution of the difficulties which have hitherto involved this subject, and to the elucidation of truth—the great end and object of my inquiry. When, however, find it acknow-

leged by Sir Astley Cooper himself, that perpendicular fractures through the head and neck of the femur, through the patella, and through the olecranon, will unite by bone, I cannot admit that a different law influences transverse fractures of the same parts. The difference consists in the more perfect adaptation of the broken parts and the more permanent state of rest, and not in any deviation from the laws of the animal economy. Let us then direct our whole attention to this one object, and by improved means endeavour to accomplish this desirable end. Instead of indulging in angry discussions, and anxiously seeking for additional proofs of non-union, let us steadily exert ourselves in endeavouring to prevent deformity and lameness, and to restore our patients to the perfect use of their limbs. By having pursued this plan, I am happy to say that I can produce several living instances of complete success; and should my own life be sufficiently prolonged, and the prejudices of the public against anatomical investigations not prohibit, I shall hope some day to produce unequivocal proofs in support of the possibility of bony union.

I shall conclude for the present these observations, with reiterated assurances that I entered on this inquiry as a public duty with much repugnance, and that I feel truly sorry that what I have stated should have created any angry feeling in Sir Astley's mind. In animadverting on that gentleman's work, I have only touched on those parts which were of importance to the subject under discussion, and no unfriendly or personal feeling for a moment influenced my mind.

I sincerely feel, and hope always to feel, sentiments of respect and regard towards that gentleman, and of cordial good will towards my professional brethren who are connected with the excellent school of which he is so distinguished a member.

Sept. 13, 1823.

Case of Anasarca successfully treated by Acupuncturation. — By JOHN TWEEDALE, M.D., Lynn-Regis, Norfolk.

IN the absence of the Physician who had been in attendance for some months, I was requested, on the 1st of August last, to visit Mrs. ——, of this town. I found her labouring under anasarca in a very advanced stage; the cellular

membrane of the upper and lower extremities and trunk being enormously distended with fluid, accompanied with cough and most distressing dyspnœa.

Various diuretics and cathartics had been administered, but without benefit.

I prescribed still more active hydragogues, a blister to the chest, and saline pediluvia.

On the following day, the family physician having returned from the country, I met him in consultation, when it was determined to continue the plan recommended by me on the preceding day.

Several days having elapsed under very active treatment without any material relief to the patient, I was induced to recommend a trial of acupuncture. That operation was readily submitted to, and was performed with a common needle of middling size, guarded with a small piece of sealing-wax at the eye, to prevent injury to the surgeon's finger, and with a thread passed a few times round the needle, at rather less than a quarter of an inch from the point, in order that the punctures might not exceed the depth required. With a needle thus guarded, about a dozen punctures were made in each leg, within a very few minutes, and with little or no pain to the patient.

The result has been most satisfactory: the arms and trunk were, in the course of a week, reduced to their natural size, and nothing now remains but slight œdema of the ankles and feet. As the punctures had closed, the operation was repeated with a triangular-pointed (small glover's) needle, which enters the skin more readily, and leaves a more permanent puncture, than the round-pointed needle.

Scarifying and puncturing with the lancet are not only more painful operations, but are not unfrequently followed by unpleasant consequences. I am of opinion that the method above described may, in almost every case of anasarca, be resorted to with perfect safety, and with at least temporary relief, to the patient.

At the time this case occurred, I was not aware that Dr. Sutton and Mr. Finch had tried acupuncturation in anasarcous cases; but I am happy in adding my testimony to theirs, not doubting but that this simple operation will be found a most valuable auxiliary in the treatment of anasarca.

Lynn-Regis, Norfolk, Sept. 8, 1825.

Case of Chronic Water of the Brain, in which Pressure proved most beneficial. By J. F. BARNARD, Esq., Bedford, Member of the Royal College of Surgeons, London.

FROM the fatality so commonly attending chronic hydrocephalus, now so frequent among children, I have been induced to submit to the readers of the REPOSITORY the following case:—

A child, about a year and a half old, was born, to all appearance, perfectly healthy, and continued so until six months old, when the head was first observed to increase in size. I did not see it until the disease was so far advanced that I almost entirely despaired of its terminating favourably. The head was exceedingly large, weighing, I should think, nearly as much as two-thirds of the rest of the body. The child lay in a state of stupor, and was unable in the least degree to move its head. There were a slight strabismus and rolling of the eye-balls, and almost constant startings of the muscles of the whole body, but more particularly of the face. The countenance had a cadaverous appearance, and the skin was of a yellowish colour. The eyes were sunk in their sockets, and enclosed in a dark ring. The flesh was flabby, and seemingly hanging on the muscles. The evacuations from the bowels were particularly unhealthy; sometimes green, sometimes blackish, but never of a healthy colour; nor indeed had they been healthy since half a year after its birth. The tongue was constantly covered with a thick white coat. When its head was moved, it screamed, and seemed sensible of pain. I expected the child would survive but a few days. [I should say that it had been taking purgatives and mercurials, without benefit, for some time before I saw it.] I communicated my opinion to the parents, and told them the only chance I saw of saving their child, was a plan which I shall describe, and which they readily assented to.

I had the head shaved perfectly clean; I then applied broad strips of adhesive plaster completely round the head from before backward, and cross strips from one side to the other, so as effectually to support the parieties of the cranium. I ordered the whole head to be kept constantly covered with linen dipped in cold water; and that the child should take no other medicine than a little castor oil, should the bowels require it.—Having

thus decided on my practice, I patiently waited the result. Its good effects were evident in less than a week: the little patient could move its head much better; the strabismus had disappeared; the secretions from the bowels were more healthy; and the startings of the muscles were less frequent. He had not screamed on rolling or moving the head since the bandage was applied. In a fortnight the size of the head had evidently lessened; the child was more lively, and began to take notice of the persons around it; the secretions from the bowels were perfectly healthy and evacuated regularly; the tongue nearly clean, and the skin of a natural colour; and the countenance more composed and animated. It is now two months since the bandage was first applied; and the child is in every respect healthy, except that the head still contains water, and is larger than it ought to be. The flesh is firm, and the skin of a healthy mottled hue. The water, I have no doubt, will in time be absorbed, and he will completely recover. I shall recommend the bandage to be worn until the bones are fully united.

As this disease generally attacks more than one in a family, I have advised that the younger children should wear a small roller bandage on the head to support it during the time the bones are forming, and until they are perfectly united. If this were done more generally, as it used to be, I have no doubt it would prevent many of those dreadful cases of hydrocephalus we find in the present day. It is allowed by medical men that the disease is more frequent now than formerly; and to what greater cause can we ascribe it, than to the omitting of the application of that kind of bandage which was usually employed to protect the head of the infant from injury, and to support its imperfectly ossified and yielding parietes.

That this child was greatly relieved by the manner of bandaging which I employed, and that alone, I firmly believe. In order to ascertain more accurately the efficacy of this practice, I ordered that the child should take no medicine, —not even the castor oil, unless it was absolutely requisite It was necessary to give it small doses of the oil, but not oftener than once or twice a week, and that in the very outset of the plan. Its principal food during the cure was eggs and milk; I also allowed

it a very small quantity of wine, as a stimulant to the stomach.

Bedford, July 23, 1823.

Case in which Hydatids were discharged in considerable quantities from the Intestines. By Mr. T. M. GREENHOW, Surgeon, Newcastle.

MASTER SELKIRK, aged 9, went to school on the morning of May 2d, in his usual state of health. At 11 o'clock, A. M. he was taken home ill, having been suddenly seized with acute pain in the head and abdomen, accompanied with violent shivering. I was requested to visit him at nine o'clock the same evening. He then complained of severe pain in both temples, great pain and tenderness on pressure of the abdomen, impatience of light, eyes glassy, and wild in their expression, delirium, subsultus tendinum. His countenance was exceedingly oppressed, the surface generally very cold, tongue parched, and covered with a thick brown fur; pulse very quick (130) and wiry. He had vomited frequently, and had passed several small slimy stools. *Let blood to the extent of six ounces.* Leeches to the temples; warm bath, and friction with a coarse cloth or flannel. *Take four grains of calomel immediately, and a draught with infusion of sennæ and Epsom salts, in the morning.* The bleeding produced sickness, and was followed by some remission of pain in the abdomen and temples.

May 3*d*, 5 o'clock, *a. m.*—Had been easier, and slept in the early part of the night, but had lately become worse. Much pain both in the head and abdomen; great restlessness and delirium. He had passed both urine and fæces unconsciously. Pulse very quick and sharp; surface still very cold. *Let blood to the extent of four ounces.* To be sponged with warm vinegar and water, afterwards repeating the friction, and applying heat to the feet and hands. The stools were still scanty and slimy, and he had vomited the draught. *Take four grains of calomel immediately, and, in one hour afterwards, half an ounce of castor oil.*—10 o'clock, *a. m.* Head and abdomen have been easy since the last bleeding. Delirium continues, and he is very drowsy. The castor oil was rejected. Stools of the same character, and still passed insensibly. Pulse very quick and small; coldness of the surface continues. *Apply a blister to the head, and take three*

grains of calomel every four hours.—4 o'clock, *p. m.* No material change. Has vomited every thing except the calomel. No change in the nature of the stools; but he has used the pot since the morning. An effervescing draught to be taken occasionally.—10 o'clock, *p. m.* The pulse is now a mere flutter at the wrist, scarcely to be felt, and cannot be counted. No pain, but excessive restlessness and delirium; frequent hiccough; stools as before; countenance greatly oppressed; and the surface everywhere pale and cold. Repeat the warm bath and friction.

May 4th, Morning.—Remains much in the same state. Says he has no pain. Stools as before. *Take four grains of calomel every four hours.*—*Evening.* No change. Repeat the bath and friction.

May 5th.—Stools of the same description. Pulse rather more distinct. The blister, which was applied on the third, remains on, but has not risen. *Repeat the calomel, as last ordered, and in the evening give an injection.*—*Evening,* Is somewhat better. Stools rather more plentiful. Pulse more distinct. Has slept in the course of the day, and has retained some chicken broth. Less coldness of the surface. *Repeat the calomel.* Repeat the bath, *&c.*

May 6th, morning.—A great improvement has taken place. Large quantities of hydatids have been discharged from the bowels, accompanied with much mucus. All his bad symptoms have vanished. No pain; no delirium; tongue cleaner and moister. Skin comfortably warm and moist. Pulse soft, and not exceeding 100. The vomiting has ceased, and he has had some refreshing sleep. More hydatids were discharged in the course of the day. The mouth became affected with the calomel, which was now omitted, 74 grains having been taken in three days.

From this time his convalescence has been progressive, the bowels were kept open with a mixture of magnesia, taken with lemon juice. That the remarkable matter discharged from the intestines of this patient was the cause of this very acute attack, cannot, I think, be doubted; especially when it is considered how all the unfavourable symptoms disappeared at the same instant of its removal from the system. How long it might have existed there, it would not be easy to determine; its formation must probably have been

going on for a very considerable length of time. For the last year he had been subject to occasional disordered action of the abdominal viscera, attended with griping, and local tenderness in the region of the liver. During the winter, an attack of this kind had been overcome by repeated doses of calomel and saline purges; and for several weeks he appeared in perfect health.

The hydatids discharged, in this case, were of various sizes and different colours. Some were transparent and light brown; others opaque and pale green, very nearly resembling boiled gooseberries, and of about the same dimensions. Others were much darker; and the mucus which accompanied them was also of a dark green colour, probably from the effects of the calomel. They were unaccompanied by any fæces, the whole being entirely without odour. I should, perhaps, have felt diffident in declaring this matter to consist of hydatids, notwithstanding its strongly-marked character, had not the opinion of Dr. Ramsay (who had visited this patient with me on the third and following days) entirely coincided with my own respecting it.

This case appears to me curious and interesting, both on account of the train of alarming symptoms which were induced, and of the cause by which they appear to have been occasioned. When I was first called to this patient, I was impressed with a conviction that inflammatory action was going on in the abdomen, and that great determination existed to the head. In these circumstances I thought it right to bleed, although the general state of the system rendered it necessary to do this with great caution; and though the quantity of blood drawn was small, the relief obtained was considerable; and after the second small bleeding, the pain both in the head and abdomen was permanently relieved. It will readily be supposed that little hope of his recovery was entertained; and, indeed, on the evening of the 3d, I must confess I considered him actually in a dying state. The warm bath and friction I believe to have been the means of saving him at that time. It is remarkable that, after a cold stage of pyrexia, which lasted more than three days, when at length (on the discharge of the offending matter from the intestines) re-action took place, it should have been so moderate and healthy. The incal-

culable rapidity and extreme oppression of the pulse at once subsided, and a moderate, soft, and equable action of the vascular system was established. —*Edinburgh Medical and Surgical Journal.*

Newcastle, May 24, 1823.

On Obstruction of Blood in the Lungs.

We shall now examine how far the obstruction of the blood in the lungs, from a deficiency of pure atmospherical air, is adequate to explain the cause of some of the vital phenomena observed in health and disease. All physiologists agree in admitting the direct dependence of the nervous system upon that of the sanguiferous; therefore the nervous system must lose its energy, in proportion as the circulation is diminished or impeded. As the nervous influence is the stimulus which excites the voluntary muscular system into action, it follows, that the latter must be enervated in proportion to the diminution of the energy of its stimulus. We often observe prostration of strength arising from a very short continuance of anxious exertion. I allude to that exhaustion which comes on when the will directs the nervous stimulus to the action of a certain set of the voluntary muscles, at the same time checking the action of all the others. For example, two passionate lads fighting, in a few rounds (without any serious injury, or a long continuance of unusual exertion), will fairly come to a stand, breathless and exhausted, with a sense of anxiety about the præcordia. To recruit themselves, they will "set to," as it is very emphatically called by the *fancy*, "bellows mending;" and, in a short time, the uneasiness about the heart will wear off, the strength will be recovered, and the contest will be renewed again with vigour. How are we to account for this rapid exhaustion, and equally rapid restoration of strength? Why, the muscles of respiration being semi-voluntary, are under the control of the will; when the will directs its whole attention to the action of any particular set of muscles, the function of respiration is checked as long as the uneasy sensation, from the accumulation of blood in the pulmonary artery, can be endured. The effect of this partial stagnation of the circulation is a diminution of the nervous stimulus to excite the muscular system into action. The more intent the will is, in directing the nervous stimulus

to any particular set of the voluntary muscles, the less sensible will the system be to the uneasy sensation arising from the accumulation of blood in the pulmonary artery; consequently, the sooner will there be a diminution of nervous energy to stimulate the muscular system. To relieve the exhaustion of strength, and the anxiety about the region of the heart, the system demands an additional supply of pure air to unload the pulmonary artery. As this congestion is removed, the unpleasant sensations vanish; and as soon as the system is renovated with the vital stream, it is invigorated, and the individual recovers his wonted strength. This view of the subject teaches every pugilist a valuable lesson: that is, never to interrupt his breathing unnecessarily; or, in other words, not to exhaust his strength by too anxiously watching his adversary's motions. It is well known, that a passionate pugilist exhausts himself much sooner than a cool one; and the reason is, that the passionate pugilist, from his great anxiety, is less sensible to the uneasy sensation occasioned by the accumulation of blood in the pulmonary artery; therefore he interrupts his breathing for a longer period than the cool one; consequently, he exhausts himself sooner.

We shall next attempt to explain the cause of an occurrence which often happens when we are in the full enjoyment of our health, but which is oftener a concomitant of one of the most fatal of diseases: I allude to the rupture of the pulmonary artery. Hæmoptysis, in my opinion, is generally the effect of an accumulation of blood in the pulmonary artery, arising from a deficiency of pure atmospherical air in the lungs, to decarbonate the blood immediately on its being conveyed into that viscus.—The deficiency may arise from an interruption of the action of the respiratory muscles; as, from the immoderate use of the vocal organs; or, from inspiring rarefied and impure air; or, from the overdistention of the stomach, limiting the action of the diaphragm. Public speakers, singers, and performers on wind instruments, are too well known to be the frequent victims of hæmoptsysis. The enthusiastic orator, stimulated by the interest of his subject, and proud of the approbation of his audience, endeavours, by every exertion, to make the greatest impression upon his

hearers: by so doing, he interrupts his respiration, and occasions a partial accumulation of blood in the pulmonary artery. If this interruption is often repeated, the pulmonary artery must become more and more dilated, as well as debilitated, and at last hæmoptsysis will succeed; or, from habitual irritation, the foundation of a more insidious disease will be laid:—I mean tubercular consumption. If the last conclusion be correct, we can account for the frequency of tubercular consumption in countries subject to sudden vicissitudes of the atmosphere. The consequence of sudden and frequent changes of temperature must be sudden and frequent floods of blood, as it were, rushing into the lungs, especially into the lungs of those who have very delicate and highly sensible constitutions. The pulmonary arteries of open-chested persons easily accommodate themselves to those frequent torrents; as the blood, from the capacity of their lungs, is immediately exposed to the influence of the atmosphere, and undergoes the necessary change to admit it to proceed onwards without any delay. The pulmonary arteries of narrow-chested persons, on the contrary, soon feel the effects of a sudden increase in the circulating medium; for their lungs are unable to supply the increase of blood immediately with pure air, so as to enable it to proceed onwards without delay; therefore a temporary accumulation takes place in the pulmonary artery, which must irritate its extreme terminations.

To enter into the detail of every phenomenon which, in my opinion, arises from the obstruction of the blood in the lungs, would lead me beyond the limits of an article intended for a periodical publication. If my corollary, that the blood is obstructed in the lungs from a deficiency of pure air, be correct, then I have no doubt that, from the labour of others, a rapid advancement will be made in the pathology of all the diseases of the respiratory organs. If our theory be admitted, it will probably lead, in the treatment of these diseases, to a firmer reliance on the efficacy of certain medicines of acknowledged power in regulating the circulation; and it will render most of us less susceptible of being made the dupes of charlatanism. It will, in many cases, suggest to us a valuable prophylactic; and it will procure a more ready compliance to our ad-

vice from many who are predisposed to diseases of the respiratory organs, more especially from public speakers. Most men are prone to turn a deaf ear to an advice which is to ward off what they suppose to be an imaginary evil. But if we can convince a person that the blood stagnates in his lungs every time he interrupts his respiration, by uttering long periods, and that that interruption endangers the rupture of a blood-vessel, or that it engenders in his bosom one of the most unrelenting of diseases (tubercular consumption), surely, under such an impression, no one will be found so careless of his health and life, as not to pay some share of attention, during his professional duty, to the important function of respiration.

Now, I flatter myself, that the cause of the phenomenon that reserved the discovery of the circulation of the blood to modern times, and to the honour of our country, has been disclosed, and that no one for the future, however sceptical, will be able to urge the vacuity of the arteries after death as an objection to the doctrine of our immortal Harvey.

How far temporary accumulations of blood in the pulmonary artery are a source of disease, I leave to the decision of time. Yet I must say, that Dr. Traill's coinciding with my views on the subject has made me not a little sanguine, that my pathological speculations are founded upon a substantial basis; and I cannot refrain acknowledging, that I am gratefully sensible of my obligations to Dr. Traill for his kindness during the above inquiry, as well as at all other times.—*Dr. Williams, in the Edinburgh Medical and Surgical Journal.*

FATAL EFFECTS OF FEAR.

A MAN of colour, of middle age, rather above the common stature, robust, and apparently in good health, was received into the London Hospital, labouring under a moderate-sized aneurism of the femoral artery. An operation was proposed to him, to which he readily assented. On entering the theatre, however, he fainted; some wine and water was given to him, which he distinctly swallowed, and the operation was proceeded in, the artery exposed, and the ligature applied, but not tightened. During the operation, it was observed that no pulsation could be felt in the tumour, but this was accounted for by the fainting. Before

tightening the ligature, it was suggested by the operator to wait until the pulsation was re-established. Some increased attention was then paid to arouse the dormant energies of the patient; and it was remarked, that the syncope had continued an unusual time. After the attempts had been some time persevered in, a more attentive observation proved that he was quite dead. All the usual resuscitative means were tried, but without effect. On dissection, both sides of the heart were found empty, and the lungs tinged with blood: no other particular appearance was observable.

COMPOSITIONS OF QUACK MEDICINES.

Dalby's Carminative.—Tincture of opium, four drachms and a half; tincture of assafœtida, two drachms and a half; oil of carraways, three scruples; oil of peppermint, six scruples; tincture of castor, six drachms and a half; rectified spirits of wine, six drachms; put two drachms into each bottle, with magnesia one drachm, and fill up with simple syrup and a little rectified spirits of wine.

Daffy's Elixir.——Senna leaves, four ounces; santile wood shavings, dried elecampane root, aniseeds, carraway-seeds, coriander-seeds, liquorice-root, of each two ounces; raisins (stoned), eight ounces; proof spirit, six pounds.

Spilsbury's Antiscorbutic Drops.—Corrosive sublimate, gentian root, dried orange-peel, of each two drachms; crude antimony, red saunders, of each one drachm; rectified spirits of wine, water, of each eight ounces.

Balsam of Honey.—Balsam of tolu, honey, of each one pound; rectified spirits of wine, one gallon.

Scot's Pills.—Barbadoes aloes, one pound; black hellebore root, jalap root, prepared kali, of each one ounce; oil of aniseed, four drachms; simple syrup, a sufficient quantity.—*Gray's Phar*

LECTURE I.

Irritation.

THE subject of this evening's lecture is Irritation, which being one of the most important topics in surgery requires to be attentively studied, and its effects carefully watched, before any one can practise in his profession with credit to himself or advantage to others.

Irritation is either local or general, and its effects are com-

municated from one part to another, through the medium of the nervous system, so that the heart, brain, and stomach, almost immediately after an injury has been sustained, even in the remotest parts of the body, will have their functions more or less disturbed in proportion to the extent of the injury and importance of the part injured. All the actions of the body are excited and sustained by internal and external impressions, which are called stimulants: the blood, for instance, being the stimulus to the blood-vessels; the bile, to the intestines; and caloric, in a certain degree, a stimulus to the whole system. Between all the different parts of the human frame there exist intimate relations, which correspond with each other, and carry on a reciprocal intercourse of actions. The beautiful harmony produced by these concurrent phenomena is called sympathy. Thus impressions not only produce effects on the part to which they are directly applied, but in consequence of the freedom of communication between the nervous system, parts of the body situated at a distance from those in which the original mischief exists become affected by it: the real nature of sympathy is yet unknown, but we are acquainted with many of its effects. Thus numerous examples of sympathetic actions may be adduced; the communication which exists between the uterus and breasts is a striking instance of it. Sneezing is a sympathetic action between the nose, velum palati, and the abdominal muscles; coughing, also breathing, and the expulsion of the fæces, are a few among the numerous examples which might be enumerated.

But sympathetic action is also the result of injury and disease, becoming the cause of restoration on the one hand, or of destruction on the other, and this state of the body I call Irritation. Irritation, gentlemen, may be defined to be an altered action, excited in the system by an unnatural impression. Thus sympathetic pain is experienced in the knee and foot from diseased hip, and at the extremity of the penis when there is stone in the bladder. The passage of an urinary calculus through the ureter occasions retraction of the testicles and pain in the thigh; disease of the prostate causes pain on the inside of one or both thighs. A disease of the liver occasions pain in the shoulder; a diseased testicle,

pain in the loins; irritation of the intestines, an itching of the nose.

These sympathetic effects, which we have just been describing, do not consist of morbid actions in the parts thus affected, but of disordered sensations. But morbid actions are also, sometimes, excited in parts near to, or at a distance from those originally affected. Inflammation of the testicle is frequently the consequence of irritation in the urethra; and swellings of the breast, of a morbid action of the uterus: but there is no organ so much affected by irritation, or sympathetic influence, as the stomach. For instance, if a blow is received on the head, causing injury to the brain, vomiting is one of the first and most constant symptoms, being imparted to the stomach through the eighth pair of nerves, and by this we are led to detect the injury. Vomiting is produced when the testicles are injured, or intestines burst, wounded, or strangulated, and from a gall stone passing the biliary duct; indeed, an obtuse pain in any part of the body will occasion sickness.

The consequences of irritation are so numerous and important, gentlemen, that I shall relate to you the medium of its communication. Irritation is generally communicated through the medium of the nerves, of which there are two grand divisions in the body. The first composed of the brain, spinal marrow and their nerves, which naturally convey sensation and volition; the second consisting of the grand sympathetic nerve, the centre of which is behind the stomach, in the semilunar ganglion and solar plexus. The modes of sympathetic communication are various. In some instances, the course of irritation is from the irritated part to the sentient extremity of the nerve, as the pain experienced in the knee and foot from a disease of the hip. In other cases the course of sympathy is from the affected part to the origin of the nerve, as in pain in the loins consequent on diseased testicles. Irritation on the nerves of the grand sympathetic is communicated to the stomach, probably through the medium of the semilunar ganglion, and all injuries to the stomach are attended with serious effects. I could relate to you several instances in which injury to this organ had proved fatal. A man walking through Fleet-street one day, happened to quarrel with a woman, when another

came up, and gave him a blow in the region of the stomach, which caused almost instantaneous death. On dissection, no cause could be found to account for his sudden death. A man belonging to the India House was attempting to lift a weight, when another came up, and jocosely said, "Here, stand on one side, and let an abler man attempt it;" and at the same instant gave him a slight blow on the stomach, when the poor fellow dropped down and expired. His body, upon being opened, showed no marks of violence.

Irritation is either local or constitutional.

Sometimes it is local, affecting only particular parts; at others, attacking the whole system. A decayed tooth will produce an abscess, and the matter will escape by forming an opening through the cheek. This ulcer will be very difficult to heal if the tooth remain; but extract it, and the disease will quickly disappear, the cause of irritation being removed. Many cases of this kind have fallen under my observation, and I will relate a few by way of illustration.

Cases.

Some years since, two persons came to me from WISBEACH, (without being aware of each other's situation, or of what surgeon each had consulted,) both having an extensive abscess near the alveolar process, which had produced an opening through the cheek. The disease in both had been of long standing, and the pain extended to the surrounding parts of the jaw. I directed a diseased tooth near the ulcer, in each person, to be drawn, which being done, the patients rapidly recovered.

A lady in ESSEX had, for a long period, been afflicted with a fungoid granulation, which protruded through an ulcer in the cheek, and which had resisted the use of every means. Upon stating one day that a tooth near the part was occasionally painful, she was recommended to get it drawn; the tooth was extracted, and the fungus quickly disappeared.

A gentleman of my acquaintance had, for many years, been exceedingly annoyed by an ulcer on the chin; every attempt to heal it having proved ineffectual, it was considered incurable. At length, one of the teeth opposite the wound becoming painful, it was extracted, when, to the delight and astonishment of the patient, his malady disappeared.

These cases are mentioned, to show the importance of endeavouring to ascertain the *causes* of diseased sympathetic actions, as the removal of those effects will depend on the cure of their causes. If the causes be undiscovered, the effects are likely to continue in spite of every means that you may employ.

The constitutional or general effects of irritation are frequently produced by the most trivial local causes. A person, on having a bougie passed into the urethra for the first time, feels faint, becomes sick, looks pale, and unless you prevent it, will fall on the ground. On placing him in the recumbent posture, he soon recovers his senses; but constitutional irritation frequently comes on in the evening, which, however, soon ceases. From the irritation of the urethra you see, gentlemen, that the stomach is influenced, the actions of the heart are suspended, and the powers of the mind gone. The symptoms of constitutional irritation following injuries, are best exemplified in compound fractures. In these cases, the irritation runs very high, and the heart, brain, and stomach, are much affected. A person receives an injury to the leg, producing compound fracture of one or both bones; constitutional irritation commences generally in twenty-four hours; the patient complains of pain in his loins, extending up the spinal cord, and pain in the head. He then becomes restless, and his countenance anxious; the tongue at first is dry, and covered with a whitish fur; but, as the symptoms increase, it becomes yellow, and lastly coated with a thick brown fur. There is loss of appetite, the stomach becomes irritable, and nausea and vomiting supervene. The secretions are diminished, and the stools are white. As the severity of the complaint increases, the pulse becomes quick, hard, irregular, and alternately intermittent. The respiration is hurried, intellect deranged; all impressions on the senses are painful; subsultus tendinum, hiccoughs, vomiting, and tension of the abdomen, come on; the patient sinks into a low muttering delirium, and soon expires. Thus, in constitutional irritation, whether from injury or disease, every part of the system is affected by it, and this effect appears to be produced in the following manner. When any part of the body receives an injury, the nerves convey to all the important organs of the

body, spinal marrow, heart, stomach, &c., an impression of that injury; Nature immediately commences the restorative process, by stopping all the customary secretions; the various outlets being thus closed, the blood collects in large quantities in the heart and great blood-vessels, which propel the blood with increased force to the wounded part; this gives rise to some form of inflammation, the one best suited to accomplish the desired effect. Here is an illustration of the manner in which Nature contends for cure; during the battle, she occasionally requires to have her ardour checked, or calls for support in proportion to her want of power; we must watch her proceedings with an eagle eye, and be exceedingly cautious in all our proceedings; for if we should open the various sluices of the body, and restore the secretions too soon, we may, by abstracting blood from the injured part, prevent the restorative process; or by increasing the excitement, disturb Nature's operations.

The degree of constitutional irritation, resulting from injury, depends on several causes; —these are the importance of the part injured · the extent and nature of the injury; the state of the constitution, age, and previous habits of the patient. Thus we see, that constitutional irritation is very different in some persons to what it is in others; so that a wound, which in one man would be attended by the most dangerous consequences, might not, in another, disturb the functions of any important organ; this greatly depends on the state of the system at the time of the injury; thus, many gentlemen present would probably now overcome a disease, that in the spring would overcome them; that is, if they have been paying proper attention to their professional studies, by devoting their time to anatomical pursuits.

The following cases are important, and place in a strong light the dreadful constitutional effects which occasionally result from very slight local causes.

A man who had lived intemperately was bled by the late Mr. SAUNDERS on a Tuesday; on Thursday (having indulged in the *interim* in the pleasures of the table) the wound in the arm was inflamed; on the Saturday the inflammation had considerably increased; on the Sunday gangrene commenced; and on the Monday I was asked to see him. I found him with

delirium, hiccough, and subsultus tendinum; and on the following day he died. On dissection, the skin, to a great extent round the wound, was found mortified; the cellular membrane had inflamed and suppurated, but the vein which had been opened was not inflamed.

Dr. Ludlow, of Calne, whilst shooting, pricked his hand with a thorn in getting over a hedge; the part soon became inflamed, and though he procured the best surgical assistance, yet he died of tetanus within a week after the accident.

Another remarkable case was that of a brewer's servant, who, in removing some casks on a Saturday, had a small splinter of wood forced under the thumb nail; at the moment he did not regard it, but in the same night he awoke in dreadful pain, and requested his wife to get up and make a poultice; this he applied, but it did not afford him any relief. On Sunday he became worse; Tuesday the pain had extended up the arm, and his hand was considerably swollen. On Thursday I was requested to see him, and on examination, found that matter was formed in the hand; I made an opening with a lancet near the part where the splinter had entered, when a large quantity of pus was discharged. The man appeared greatly relieved, and I thought he would do well; but upon hearing a noise as I was about to quit the room, I looked round: he had, by a convulsive effort, raised himself in bed, but immediately fell back, and expired.

Case.

An instance of a totally different nature from those just mentioned, which shows that a great degree of injury may be incurred, and the person yet do well, occurred in another brewer's man who was run over by a dray. There was compound fracture of the elbow joint, extensive laceration of the integuments, and a large wound communicating with the joint. The man was admitted into Guy's Hospital; an operation was proposed, but the patient would not consent. The wound was therefore dressed, and in a short time it completely healed, without any unfavourable symptom showing itself.

Irritation is greatest in children, and least in aged persons; the former are very much affected by operations, whilst the latter are very slightly so. Children under two years of

age, upon having stones removed from their bladders, will be frequently carried off by convulsions; therefore, if you can possibly avoid it, never perform the operation on a very young child, at all events not under three years of age.

One of the worst kinds of irritation is that occasioned by the absorption of morbid matter during dissection; it is therefore impossible that you can be too careful of the instruments you use in dissecting and opening bodies, as carelessness on this point has caused the loss of many a valuable life.

LECTURE II.

The theatre to-night is crowded to excess; not a single seat unoccupied; many gentlemen, indeed, are at the doors peeping over each other's shoulders, unable to gain what is termed "a footing within the walls." Notwithstanding the audience is so numerous, there is no noise, no rioting, no gossipping—all seem to be fully impressed with the important nature of their profession, and the profound, undivided attention that it requires.

Treatment of Irritation.

The treatment of irritation being much the same as that required in inflammation, I shall now give but a short description of it.

When constitutional irritation arises from a local cause. the remedies must be chiefly directed to the removal of that cause, or to lessen its effects on the constitution; but, on the contrary, when local disease is either promoted or aggravated by constitutional derangement, then your remedy must be directed to the disorder of the system; and as that improves, so will the local affections disappear.

Case.

A short time since, a case of compound fracture was brought into Guy's Hospital. For the first five days there was no alteration; after a time, however, the man's constitution suffered very considerably; a probe was passed into the wound, and a loose portion of bone was found pressing against the tibialis anticus; the part was dilated by a scalpel; the detached bone extracted; the constitution began to recover its former vigour the patient's health very rapidly improved, and he is now discharged cured.

A case of simple fracture of the superior portion of the tibia was admitted into St. Thomas's Hospital, which was followed by violent irritation of the whole system. The whole limb became inflamed, and matter formed at the seat of the fracture. After a short time it was thought proper to amputate the limb, when, on examining it afterwards, small pieces of bone were found, which kept up the irritation. The patient soon recovered from the operation.

Constitutional irritation must not be too suddenly subdued nor destroyed, as a certain degree of irritation shows that Nature is endeavouring to accomplish the restorative process: keep it within bounds, carefully watch its progress, and, if necessary, check its violence, but do not entirely destroy it.

There are two means of reducing irritation.

First, by restoring to the different organs their various secretions, by which the outlets become opened, and fever lessened. A man who has his skin hot and dry, and his body altogether hot, will feel well and be relieved, if you can produce on the surface a free perspiration. To produce the secretions from the intestinal canal, you must give aperients; but when the irritation is very severe indeed, you must not limit your medicine to any particular part, but endeavour to restore all the secretions. This will be best accomplished by administering mercurials to act upon the liver, saline medicines upon the intestines and kidneys, and antimonials on the skin.

The *second* method of relieving irritation is to allay the excitement of the nervous system; this may be done by giving opium and antimony combined, or calomel, antimony, and opium, to act on the skin and liver as well as the nervous system. The dose for an adult is two grains of calomel, two of antimonial powder, and one grain of opium. To this you may add saline medicines, if you like, as they are given as much to assist the medical man as his patient (*a laugh*). It must not be considered, however, that such medicines are entirely useless: the liquor ammoniæ acetatis with tinctura opii is a good medicine. The alkalies, judiciously given, lessen the irritability of some organs, as the bladder, when in an irritable state.

In cases of irritation, bleeding must be resorted to with care, for if it be carried to a great extent, the powers of the

constitution will be unequal to the reparation of the injury.

A man was brought into Guy's Hospital with concussion of the brain; the dresser who admitted him was a great admirer of venesection, and bled the patient three times a day; in ten days he died. Upon examining the head after death, a very slight laceration of the brain was found, but no signs of any attempt at restoration. The continued abstraction of blood had robbed Nature of her restorative powers. In compound fractures it is likewise extremely dangerous to bleed largely.

Where there is chronic irritation, no medicine will be found equal to the Plummer's Pill, five grains night and morning; it increases the secretions of the liver, intestines, kidneys, and skin. If the blue pill be given, or calomel, it should be followed by an aperient in the morning, else its action will be confined to the liver.

Inflammation.

The next subject is inflammation. Inflammation is the means by which local injuries are repaired, and it may be therefore considered as the restorative principle. There are four signs that commonly attend it, *viz.*, redness, pain, increased heat, and swelling.

First. *Redness.* This arises from an increase of the red particles of blood in the part, and may be distinctly seen when the inflammation is superficial, as in inflammation of the conjunctiva of the eye.

Second. *Increased Sensibility*, which is owing to distension of the nerves by the greater quantity of blood determined to them. Parts naturally little sensible are quite the reverse when in a state of inflammation. I was called a short time since to a case where it was requisite to saw off a small piece of the tibia. During the operation I opened a cavity, in which was a small piece of bone embedded in granulations; the latter were extremely sensitive; extract of belladonna was applied, which gave instant ease. Bones, though nearly destitute of sensation in their healthy state are sometimes extremely sensitive when inflamed.

Third. *Increased Heat.* Mr. HUNTER denied that this existed. He made an incision two inches deep into the gluteal muscles of an ass, and into the wound he introduced a tin canula, one and a half inch long, so that there was half an inch of wound below the ca-

nula; he then passed a plug of wood through the canula, to the bottom of the wound, and confined it there, in order to prevent an union of the muscles. This was on a Wednesday. Immediately after the wound was made, a thermometer was introduced into it, and the mercury rose to 100°, exactly as another did at the same time which had been passed into the vagina. On the next morning the plug was taken out, and the ball of the thermometer introduced to the bottom of the wound; the mercury rose to 100°; the plug was then again returned and secured as before. In the evening the experiment was repeated with the same result. On Friday morning the thermometer, when introduced, rose to 99° only; and in the evening it rose to 101½°. On Saturday morning, when introduced again, the mercury reached 99°; in the evening 100. Mr. HUNTER also introduced a thermometer into the opening made during the operation for hydrocele, and it rose to 101°; after twenty-four hours it was no more than 100°. Though no increase of heat is manifested in internal inflammation, yet when it occurs on the surface of the body, an alteration sometimes of several degrees takes place; as on the inside of the thigh, where a blister was applied, the thermometer rose to 90°, while on the inside of the opposite thigh it only reached 83°.

Fourth. *Swelling.* This is owing in part to an increased determination of blood to the part, and also depends on effusion of the fibrin of the blood, which, in coagulating, deposits serum in the surrounding cellular tissue.

Inflammation has four terminations.

First. *Adhesion.* This arises from the fibrin of the blood being effused into the cellular membrane, by which the parts become glued together.

Second. *Suppuration*, or *secretion of pus.* This is composed of particles nearly similar to those of the blood, only differing in colour, swimming in a fluid resembling serum, and coagulating, as serum does, when exposed to the influence of heat.

Third. *Absorption*, or *ulceration.* This arises from an increased action of the absorbents, produced by pressure united with inflammation, by which the parts are absorbed.

Fourth. *Gangrene*, which consists in the destruction of

the life of an inflamed part. The arteries, enfeebled by excessive action, are deprived of their vitality, the blood coagulates in them, and gangrene is produced.

These are the constitutional effects; the local ones are similar to those of irritation, which I mentioned to you in the last lecture.

Inflammation produces different results in different parts. When seated in the skin, it usually becomes extensive, because the surface is unbroken. Its colour is very florid; it separates the cuticle in the form of vesications, which usually contain serum, but also in some cases fibrin; a serous effusion is also produced by it into the subjacent cellular tissue. In some instances it is preceded by fever, in others followed by it. In the cellular membrane, inflammation produces an effusion which obliterates or fills its cells; if it proceed, it occasions suppuration, and produces an abscess, the contents of which are frequently discharged by the process of ulceration. In debilitated irritable constitutions inflammation destroys the cellular tissue, and produces carbuncle, which is a sloughy abscess in the cellular tissue. When chronic, it occasions tumours of various kinds, as the steatomatous or adipose; or under peculiar circumstances, those of a malignant nature, as the scirrhous, fungous, &c.

Inflammation of fasciæ is generally extensive, from the large surfaces they present; they are often seen inflamed in compound fracture, producing redness of the skin to a considerable distance, and it is a very unfavourable sign in this accident. When matter is produced by inflammation of this texture, and is seated under it, great irritative fever succeeds until it is discharged; as, for example, in the palms of the hands, or soles of the feet.

When inflammation attacks muscles, it is known by the spasmodic twitchings which attend it. Tendons are not very susceptible of inflammation, but they sometimes become inflamed to a considerable extent. Punctured wounds of tendons are apt to produce tetanus more than wounds of other parts of the body. Matter formed under tendons burrows to a great extent, and produces violent irritation, as under the tendon of the occipito-frontalis muscle, and the covering of the temporalis.

Inflammation in the absorbent vessels is marked by red lines on the skin in the course

of these vessels. These form hard knots, from the skin participating in the inflammation. Their glands become also inflamed, and both glands and vessels occasionally suppurate. They more frequently inflame from common irritation than the absorption of poisons.

The arteries are rarely inflamed, excepting after wounds, or the application of ligatures. Inflammation, however, of the arteries may be very extensive, when it occurs in a person whose health is very much deranged. I have known instances where it extended even to the heart. I was present when Mr. CLINE opened the body of a man who had a ligature put on the femoral artery near the groin, and who died at the second week from the operation. The internal surface of the artery was inflamed, as was also that of the external and common iliacs, and the aorta was of a florid red internally, as far as the valves of the heart.

Veins which are inflamed from wounds become like hard and broad cords, and extremely tender to the touch; and if it occur from bleeding, it extends from the orifice to the axilla. I have seen several patients die from this cause; and on examination, the inner coats of the arteries have been generally found adhering. I have seen suppuration of a vein, and I once saw an abscess in the longitudinal sinus of the dura mater, of which we have a beautiful specimen in the anatomical collection at St. Thomas's Hospital. When inflammation of the veins is produced by the application of ligatures on them, it will be found to be greater below the ligature than above it.

Nerves are very rarely inflamed, but when they are, the pain is excessive, and there is a tingling sensation in the parts to which the nerve is distributed. Wounds of nerves, though extremely painful at the moment, are followed by little irritation.

Case.

The wife of a medical gentleman was obliged to have the posterior tibial nerve divided, for a painful tumour on the nerve, which I did in the presence of Mr. WHITE, surgeon to the Westminster Hospital; although the operation was dreadfully painful, and the pain extended through the brain, spinal marrow, and the nerves proceeding from it, yet it did not affect the nerves of the great sympathetic, directly or indirectly. I have also had occasion twice to remove portions of the sciatic nerve, when

but little constitutional irritation followed. Severe pain takes place sometimes in the course of the nerves, but whether it be from inflammation or not, I have not been able to ascertain by dissection. When the pain is excessive, it is called tic douloureux.

Ligaments, like tendons, are not very prone to inflammation in healthy constitutions; but the synovial membrane which lines them is highly so, and the inflammation has a tendency to go on to the suppurative process. In scrofulous persons, the synovial surface becomes inflamed, and the ligament covering it thickened, so as to produce great enlargement of the joints.

Cartilage in joints ulcerates from inflammation, and often becomes entirely destroyed.

The bones, like other parts of the body, are subject to inflammation; and when fractured, it is by this process that their union is effected. Suppuration, ulceration, and mortification, or the death of the bone, also attack this structure; thus you see that, like other parts of the body, it is subject to the different processes of inflammation.

Serous membranes, when inflamed, are remarkably disposed to pass into the adhesive inflammation; whilst mucous membranes, on the contrary, generally go into the suppurative state. Mr. HUNTER made several experiments to confirm these facts, which have been verified by later physiologists.

Inflammation may be of the healthy or unhealthy kind. No wound can be restored without the former; even the small puncture made in bleeding would inevitably destroy life, were it not for this salutary principle; a slight inflammatory action throws out upon the edges of the wound adhesive lymph, by which they become permanently united. When a ligature is put upon a large artery, unless inflammation supervened, no good effect would be produced. The first thing nature does in this case is, to form a clot of blood at that part of the vessel where it has been tied; inflammation supervenes, adhesive matter is thrown out, by which the internal coats of the artery become firmly glued together, and hæmorrhage prevented. If the constitution be in an unhealthy condition, this process will not be effected; so that when the ligature comes off, the person may die of hæmorrhage. Inflammation without any obvious cause is generally of the unhealthy kind, and

arises from irritability of the constitution, and an enfeebled state of the affected part.

COMPOSITIONS OF QUACK MEDICINES.

Speediman's Pills.—Aloes, myrrh, rhubarb, and extract of chamomiles, equal quantities; mixed well, and divided into four-grain pills.

Major Cochrane's Cough Medicine.——White poppy-heads without seeds, half a pound; water, six pints; boil to two pints; strain, and boil down to one pint; then add vinegar and brown sugar, of each one pound; boil to a syrup; and lastly, add a sufficient quantity of diluted vitriolic acid to make it pleasant. Take for a dose two or three tea-spoonsful going to bed.

Ruspini's Tincture for the Teeth.——Orris root, eight ounces; cloves, one ounce; essence of ambergris, one ounce; rectified spirits of wine, two pints.

Squire's Elixir.—Opium, four ounces; camphor, one ounce; cochineal, one ounce; oil of sweet fennel-seeds, two drachms; tincture of snake-root, one pint; spirits of aniseed, two gallons; water, two pints.

Ford's Balsam of Horehound.—Horehound and liquorice-root, of each three pounds and a half; boil in six pints of water; strain, and add twelve pints of brandy; one ounce of camphor; a quarter of an ounce of opium; flowers of benjamin, one ounce; dried squills, two ounces; oil of aniseed, one ounce; and three pounds and a half of new honey.

THE LATE DR. BAILLIE.

To the Editor of THE LANCET.

SIR,—The professional and moral merits of this distinguished individual have not been silently passed over by the College of Physicians. There was one trait in his character, however, which appears to have escaped the observation of those who so justly eulogise their departed and lamented brother—his professional liberality, not only to his *equals* in medical rank, but to those who practise the subordinate parts of the profession. Dr. Baillie possessed too noble a mind, too generous a heart, to endeavour by any means to blast the rising reputation of a junior. Notwithstanding the multiplicity of professional engagements which occupied *his* time, even to the destruction of his health, he

was ever punctual to the moment of appointment, and particularly so if he had to meet a junior practitioner in consultation. Dr. Baillie has been heard to express himself in the following words, in the hearing of the writer of these remarks: "I consider it not only a professional, but a moral duty, punctually to meet my professional brethren of all ranks. My equals have a right to such a mark of respect, and I should shudder at the apprehension of lessening the junior practitioner in the eyes of his patient, by not keeping an appointment with him." Such are the feelings which characterise many of the living ornaments of the profession; but I am compelled to confess there are some surgeons who, with wanton and studied cruelty, are constantly in the habit of making appointments with their professional *juniors*, not for the purpose of keeping them, but with the determination of visiting the patient *alone*. The consequence of such conduct is obvious. It is naturally inferred, if the surgeon does not consider it necessary to meet the junior practitioner, that his attendance is unnecessary, and thus the surgical aristocrat has not unfrequently the merit of injuring the subordinate practitioner, by depriving him of a part of his connexion.

I should reflect with greater pride upon the rank which I hold in the profession, if I did not know that it is not unfrequently sullied by the conduct which I deprecate. The surgical public will be fully aware of the justice of my observations. I am, Sir,

Your obedient Servant,

A SURGEON.

Cavendish-square, London.

SOMNAMBULISM.

A REMARKABLE instance of this curious affection occurred to a lad named George Davies, sixteen years and a half old, in the service of Mr. Hewson, butcher, of Bridge-road, Lambeth: at about twenty minutes after nine o'clock, the lad bent forward in his chair, and rested his forehead on his hands; and in ten minutes started up, went for his whip, put on his one spur, and went thence to the stable; not finding his own saddle in the proper place, he returned to the house and asked for it. Being asked what he wanted with it, he replied, to go his rounds. He returned to the stable, got on the horse without the saddle, and was proceeding to leave the stable; it was with

much difficulty and force that Mr. Hewson, junior, assisted by the other lad, could remove him from the horse; his strength was so great, that it was with difficulty he was brought in doors. Mr. Hewson, senior, coming home at this time, sent for Mr. Benjamin Ridge, a respectable practitioner in Bridge-road, who stood by him for a quarter of an hour, during which time the lad considered himself stopped at the Turnpike gate, took sixpence out of his pocket to be changed, and holding out his hand for the change, the sixpence was returned to him. He immediately observed, "None of your nonsense—that is the 6*d.* again, give me my change;" when 2½*d.* was given to him, he counted it over, and said, "None of your gammon—that is not right; I want a penny more;" making the 3½*d.*, which was his proper change. He then said, "Give me my *castor*" (meaning his hat), which slang term he had been in the habit of using, and then began to whip and spur to get his horse on. His pulse at this time was 136, full and hard; no change of countenance could be observed, nor any spasmodic affection of the muscles, the eyes remaining closed the whole of the time. His coat was taken off his arm, shirt sleeves stripped up, and Mr. Ridge bled him to 32 ounces; no alteration had taken place in him during the first part of the time the blood was flowing; at about 24 ounces the pulse began to decrease; and when the full quantity named above had been taken, it was at 80—a slight perspiration on the forehead. During the time of bleeding, Mr. Hewson related the circumstance of a Mr. Harris, optician, in Holborn, whose son, some years since, walked out on the parapet of the house in his sleep. The boy joined the conversation, and observed, he lived at the corner of Brownlow-street. After the arm was tied up, he unlaced one boot, and said he would go to bed. In three minutes from this time he awoke, got up, and asked what was the matter (having then been one hour in the trance), *not having the slightest recollection of any thing that had passed*, and wondered at his arm being tied up, and at the blood, &c. A strong aperient medicine was then administered; he went to bed, slept well, and the next day appeared perfectly well, excepting debility from the bleeding and operation of the medicine, and has no recollection whatever of what had taken

place. None of his family, or himself, were ever affected in this way before.

THE PROGRESS OF SCIENCE.

Native Country of the Potatoe.—Great doubts have existed with respect to the natural habitation of the potatoe. It was first known in its cultivated state in Virginia, from which place it was brought by Sir W. Raleigh; it is generally supposed, however, that the plants found there had been previously introduced from some of the Spanish territories, in the more southern parts of that quarter of the globe. From Humboldt's observations, it seems that it does not occur native in the south-western part of North America; nor is it known as a garden plant in any of the West India islands. According to Mollini, it grows wild in great abundance in the fields of Chili, in which state it is called by the natives *Maglia*, producing small and bitter tubers; and Don José Pavon asserts that he has seen it cultivated in Peru. Early in the spring of last year, Mr. Caldcleugh, Secretary to the British Minister at the court of Rio de Janeiro, in his journey along the west coast of South America, observed the potatoe in its native state. According to him, it is found in considerable quantity in ravines in the immediate neighbourhood of Valparaiso, in latitude 34½° S. It begins to flower in October (the spring of that climate), and is not very prolific, the leaves and flowers being similar to those of the plants cultivated in England. The roots are small and bitter, some with red, others with yellowish skins, and do not appear to be put to any particular use. Two of the tubers, sent to England to Captain Sabine, were planted separately in pots, and speedily vegetated, from which they were afterwards transplanted into a border, at about the distance of two feet from each other. The blossoms were at first sparingly produced; but as the plants were earthed up, they bore flowers abundantly, which, however, were not succeeded by fruit. The flowers and leaves were in most respects similar to those of the cultivated potatoe. In August, runners from the roots and joints of the covered stems protruded in great abundance from the surface of the ridge, and formed considerable stems, bearing leaves and blossoms. When taken from the ground, the principal stems measured more than seven feet in length.

They afforded above six hundred tubers of various sizes, the largest not exceeding that of a pigeon's egg, which, when boiled, had the flavour of a young potatoe. It was observed, that so late as the month of August there were no tubers formed, which was supposed to be owing to the mould employed having been much loaded with manure, by which an excessive luxuriance of the stems was occasioned. The tubers obtained also are not fully ripe, nor have they attained the size which they probably might have done had they been formed earlier. They will, however, answer perfectly well for the purpose of reproduction, and they are in sufficient quantity to be subjected to the same treatment as that practised for raising a common crop of potatoes, so that there is every reason to expect that they will yield a similar produce.

LUDICROUS OCCURRENCE.

An inquisition was taken at the house of Mr. Gilbert, the sign of the London Hospital, in Whitechapel-road, before Mr. Unwin, the coroner, on the body of Catharine Moody, supposed to be lying dead in the London Hospital, and who was reported to have come unfairly by her death. Mr. Barker, a tobacco and snuff-manufacturer, residing in High-street, Shadwell, the person accused of being accessory to the deceased's death, was in attendance in the inquest-room, together with some of his friends. The first witness examined was Mr. John Harrison, who stated that he was a carpenter, and about nine weeks ago was at work in Mr. Barker's shop, when deceased, who was intoxicated, came in and asked for some snuff. Mr. Barker desired her to leave the shop, which she refused, and being unable to procure the headborough, one of his shopmen led her out; but she returned, and began to dance and swear. Mr. Barker then put her on the step of the door; she turned round, as if intending to strike him, when she slipped off the steps and fell down. A few minutes afterwards he saw her sitting on the pavement; it was reported that her leg was broken. Mr. Barker used no violence, but put her out of the shop gently. Mr. Joseph Robinson, of No. 10, Farmer-street, Shadwell, and Thomas Thompson, of Shadwell-market, gave similar testimony. The Jury now expressed themselves satisfied that it was purely an accident,

and that no criminality was to be attached to Mr. Barker; but before they recorded their verdict, they repaired again to the Hospital, in order to view the body; and shortly before they returned, Mr. Gilbert, the landlord of the public-house, came running into the inquest-room, puffing and blowing, and exclaiming, "Oh! Mr. Coroner, the woman on whom you have held the inquest is still living, for I left her this moment eating stewed oysters, and drinking wine; the nurse who was attending her seems to have some hopes of her recovery."

The Coroner was now much embarrassed. He said he did not think it possible that such was the case; but on the arrival of the Jury, whose countenances betrayed the strongest symptoms of indignation at the hoax thus evidently played intentionally on them, Mr. Gilbert's announcement proved to be correct. The Coroner said he would endeavour to guard against such an occurrence for the future, and would never again hold an inquest on any person in the hospital, unless he previously had a letter from the beadle of that establishment, declaring the individual to be actually dead. He then addressed the Reporter, and wished that he would, if possible, keep the detail of such a ridiculous circumstance from the notice of the public.

LECTURE THIRD.

PREVIOUSLY to the arrival of Sir ASTLEY, there was brought into the theatre, and placed upon the table, some diseased part or parts, which, from the freshness of the blood on the envelope, it was evident had been very recently removed.

The learned Professor, after recapitulating the conclusion of the last Lecture, observed, that inflammation is of two kinds—

ACUTE, and

CHRONIC.

The first usually goes through its various stages with great rapidity, while the latter is exceedingly slow in its progress, and is either the result of acute inflammation, or owing to a peculiar state of constitution, occurring in persons who have lived intemperately, or who have been exposed to excessive and laborious exertion, or who are the victims of anxiety and disappointment.

Acute Inflammation.—One of the best examples of acute inflammation is seen in the

breast after delivery. The adhesive stage is marked by hardness and pain; the suppurative, by irritative fever, fluctuation, and throbbing or pulsation; ulceration usually succeeds in a short space of time, and the matter is soon discharged.

Chronic Inflammation.—A good example of acute inflammation, terminating in chronic, is observable in ophthalmia. When consulted in cases of this description, during the acute stage of inflammation, you must bleed both locally and generally. This may be done either by opening a vein in the arm, by the application of leeches to the temples and palpebræ, or by opening the temporal artery, which sometimes relieves from its free anastomoses with the ocular arteries. You should use such applications as will soothe and allay the local irritation, and these should consist of narcotic and emollient fomentations. When by these means the acute inflammation ends, the chronic frequently begins. In the first, our object is to diminish power; in the second, it is necessary to stimulate the vessels, to contract their diameters, to lessen the quantity of blood which has accumulated in them, and thus restore them to their natural state. This is best effected by astringent and stimulating lotions, as the solutions of alum, sulphate of zinc, nitrate of silver; and as the system of depletion required during the acute stage may have produced debility, the use of tonics must not be forgotten.

An instance of chronic inflammation succeeding the acute, may be seen in Gonorrhœa. During the first stages of this complaint, we are obliged to check the action of the vessels of the urethra, but afterwards to excite it by the balsam of copaiba, and slightly stimulating injections.

Inflammation is of two kinds, either

Common, or

Specific.

The first, with its terminations, has been already described, and is called healthy inflammation. But the second, or specific, is of a peculiar kind, and is called unhealthy. In this inflammation, the vessels have an entirely different action to what happens in the healthy, and thus the fluids and solids they secrete have a decidedly opposite character.

There are two descriptions of specific inflammation: the first is produced by a peculiar condition of the constitution; and the second, by the application of a poison.

Gout is an example of the first kind. If a man for a length of time yield to every injurious excess, loading his stomach with food and wine, so as to weaken the digestive powers, he probably excites in his system what is called the gouty disposition; he experiences dreadful pain in one or more of his toes, &c., and severe inflammation ensues, which frequently terminates in the secretion of a matter that speedily becomes solid, usually called chalk-stone; this name, however, is incorrect, as it has been proved by the analysis of Dr. WOLLASTON to consist of uric acid and soda, consequently is now very properly named urate or lithate of soda.

The formation of scirrhus or cancer is another example of specific inflammation, arising from a peculiar state of constitution. Let us suppose that two women receive each a blow on the breast; one woman with a constitution in a healthy, vigorous state, and the other with a system predisposed to the formation of cancer: in the first individual the inflammation will be strictly healthy, going through its different stages until a cure is accomplished; in the other person, owing to a constitutional peculiarity, the same extent of injury will produce cancerous disease, a malady over which medicine has no influence, and extirpation is only an uncertain remedy. Persons afflicted with cancerous or fungous complaints are of exceedingly anxious minds (at least nine times in ten); this anxiety occasions a sort of irritable fever, which invariably proves detrimental.

But the best example of specific inflammation is scrofula. Persons attacked by this disease have generally light hair, fair complexion, delicate appearance; when inflammation occurs, it is slow in its progress, although easily excited; and at last, ulceration taking place, the discharge consists of curdy matter, or a thin serous fluid, not at all resembling the pus which is formed in healthy inflammations.

The second kind of specific inflammation is caused by the application of poisons. Thus, in gonorrhœa, the matter secreted is widely different from common healthy matter, having, in the first place, a much larger quantity of mucus mixed with it; and, secondly, when applied to a secreting surface, is capable of exciting in the part an action by which similar matter and the same effects can be produced. The matter

of small-pox occasions the same result, and as far as constitutional effects are concerned, it does not seem material how large or how small a quantity of the poison is applied, the result in each case depending upon the state of the constitution.

There is another kind of inflammation which I would call the *irritables* in this disorder the nerves are much more affected than the blood vessels. You are called probably to attend a person, who tells you that he feels in a particular part, as the hand or arm, a most agonizing pain; and if inexperienced in these matters, you will be inclined to doubt the correctness of your patient's statement, and the more so as you can discover no alteration in the appearance of the part. It may not be amiss to mention here what happened to me yesterday. Some time ago, I was requested to see a lady having this complaint in her foot: I tried by every possible means to remove it, but in vain. When unsuccessful, I invariably recommend the sufferer to some one else. This lady consulted two other very eminent surgeons, but their efforts, in like manner, were unable to afford relief; and finding that she got worse in town, she went into the country for change of air, where, without any medical means being employed, she entirely got rid of her troublesome companion. I saw this lady yesterday, and she described the pain that she used to feel as horrible; it was constantly at the bottom of her foot; and if she walked but a very short distance, it occasioned a confinement during four or five days.

The eyes are very subject to this torturing disorder. But no parts are more frequently attacked by it than the breasts of young women. It produces such a degree of tenderness that they cannot bear the slightest pressure, and their stays consequently occasion great inconvenience—the pain extends to the shoulder, down the arm, and even to the elbow, at the same time producing constitutional irritation. To cure these pains and general derangement, such medicines must be given as will influence the secretions, but more particularly those of the uterus.

The irritable inflammation frequently attacks the testicles, and renders them exceedingly sensitive, the slightest pressure causing very great pain. There is in these cases little or no alteration of size; if any difference, the affected one is the smallest.

In three instances I have been obliged to remove testicles for this disease. The subject of one of these cases was a gentleman from South Carolina: he came to England for advice, and went the whole round of medical men, without experiencing any alleviation of his sufferings. He then desired me to remove the torturing part; this was done, and the gentleman went back to his native country quite well. I heard, that soon after his return he got married—*(a laugh)*—and am happy to add, that his lady had a child—*(excessive laughter)*.

The bladder is also very commonly disordered by this irritable inflammation, and the symptoms in many respects resemble those of stone—in both cases there is pain in making water, and the urine is frequently mixed with blood. The grand difference in the two cases is this: the irritable bladder is most painful when the organ is *full*: the bladder that contains a stone, when it is *empty*. Upon dissection, the inner coat of an irritable bladder has been seen the colour of red velvet. I have known this irritable inflammation attack the rectum, and produce excessive suffering, which was relieved by large doses of soda. Soda, rhubarb, and the compound powder of ipecacuanha, are the best remedies.

Inflammation sometimes arises from debility, and this state is frequently seen in the lower extremities of old persons, in whom the blood returns to the heart with difficulty. From this weakened power, the arteries are called upon for unusual exertion, and inflammation of the skin succeeds, frequently attended with incrustations, a serous discharge, and sometimes with a watery secretion into the cellular tissue.

Irritable persons are much more predisposed to inflammation than others, and when it occurs in them it is of a more dangerous nature than in those who are not irritable. Thus in fevers, when the constitution has been much weakened, the parts on which the body has been resting become inflamed, and quickly mortify. But in fractures, where the system is healthy and strong, although the patient remain many weeks in bed, no such effects are produced. Where there is great irritation, inflammation is always dangerous: and the application of a blister to the chest, for the removal of a cough after measles, frequently, in this town, destroys

it by bringing on mortification. Mercury, in like manner, by rendering the body irritable, disposes it to inflammation; and it is wrong to operate on a patient immediately after a mercurial course, on account of this inflammatory tendency.

The exciting causes of inflammation are whatever produces an unnatural state of the part, calling upon nature for its reparation, which she effects by the process of inflammation, as bruises, warts, pressure, extraneous substances, *&c. &c.* The manner in which Nature repairs these injuries will be more fully explained hereafter.

Proximate Causes of Inflammation.—With regard to these there has been, and still is, much difference of opinion. BOERHAAVE's opinion of an obstruction in the smaller vessels, arising from the thickness of the blood, is false—for, instead of being thicker, it is absolutely thinner. CULLEN's theory of spasm in the extreme vessels, is equally erroneous. These are the results of opinion not founded upon observation. We should observe first, and think afterwards. The true proximate causes of inflammation appear to be an increase of action in the vessels of the part, and an increase in the size of the vessels themselves. These phenomena are well demonstrated by the following experiment; viz., Stretch the web of a frog's foot, and place it under a good microscope, put on it the smallest drop of nitric acid, or prick a spot with a pin: you will soon perceive in the vicinity of the irritated part considerable agitation, and presently a red particle of blood will make its appearance in a vessel that had previously been the receptacle of transparent serum only—each pulsation pushing it on farther and farther. This red particle distends the vessel, and is succeeded by others passing freely into the vein. All the vessels of the part then take on similar actions; and thus you create under your eye, speaking figuratively, meandering rivulets of blood. The dilatation of the vessels in inflammation is not, however, confined to the part itself, but is also observable in the larger arteries leading to the scene of irritation: thus, in persons who have died, having inflammation in a foot, the femoral artery on the affected side has been found larger than the opposite. I before explained the manner in which Nature

throws a quantity of blood to a part for the purpose of repairing an injury, or for the removal of irritation; I will give another illustration of this, which, if you have not seen, most probably all of you have felt. It is this: when any offending matter gets under the eyelids it produces irritation;—Nature immediately sends a quantity of blood to the lachrymal gland—this blood occasions a secretion of tears, and these are directed in streams over the eye, for the purpose of washing off the offending substance.

Sir ASTLEY then stated, that he would show the gentlemen present a beautiful specimen of fungus hæmatodes. [This was what we spoke of as placed upon the table before the commencement of the Lecture.] The tumour was of very large size, and, when cut open, exhibited the usual characteristics of this malignant disease; viz., cysts filled by a transparent fluid, extravasated blood in clots, some of its parts were whitish, while others were very dark, and the whole was of a spongy, elastic texture.

LECTURE IV.

GENTLEMEN,

I shall occupy your attention this evening with the treatment of inflammation.

Treatment of Inflammation.

This is either constitutional, local, or both combined. When any important organ is injured, or its functions disturbed in consequence of the influence of the injury on the constitution, the treatment must be invariably constitutional, let the local be whatever it may; for no vital organ can be disturbed in its functions without producing general derangement, which will be, more or less, in proportion to the importance of the part wounded, and the extent of the wound. —Inflammation, however, in many persons, requires constitutional treatment, whether any important part be injured or not; as, in irritable habits, where very trivial local damage will speedily affect the entire system.

The most powerful means of relieving inflammation is by the abstraction of blood. Its beneficial effects principally result from producing a diminution of nervous power; and that it does accomplish this is proved by the syncope which it occasions. Thus, often the removal of a very small quantity of blood even causes a suspension of the mental facul-

ties, as well as of all the voluntary functions. Fainting, however, cannot be suddenly produced unless the patient be in the erect position at the time the blood is drawn; for it is the loss of this fluid, by the vessels of the brain, which is the immediate cause of fainting. To prove this, when you next bleed a man until he faints, place him in the recumbent posture, and let his head be situated a little lower than his body, to facilitate the return of blood to the brain: in a very short time after being thus placed he will open his eyes, and all his faculties will resume their former abode.

The second mode by which bleeding relieves, is by lessening the quantity of blood; for when there is much fulness of the vessels, the momentum will necessarily be great, and consequently the vital fluid will be thrown with greater power, not only to the inflamed, but to every other part of the body.

The third mode by which bleeding proves serviceable, is by facilitating the re-establishment of the secreting functions.

The indication for bleeding is a *hard* pulse. In this state of the pulse the diameter of the vessel is diminished, yet the action is exceedingly strong, and each pulsation of the artery feels like the vibration of a wire: whenever, therefore, you find this description of pulse, you will be justified in taking away blood.

The hardest pulse that I ever met with, was in a person who had inflammation of the heart; in inflammation of the lungs and of the brain the pulse is hard, but not to be compared to this. The pulse, however, is not always hard when inflammation attacks important parts. The contrary is sometimes the fact; for, when the stomach or intestines is thus affected, the pulse is scarcely discoverable. Persons, unacquainted with the nature of this fact, are frightened at seeing a man frequently bled, who has, for example, strangulated hernia, and will often exclaim, "Pray don't bleed him any more, see how pale he is, and his pulse is almost gone." Well then, recollect, that in inflammations of the abdominal viscera the pulse is feeble; but inflammation of the liver, however, is an exception to this rule.

Quickness of pulse is not in itself a sufficient proof that bleeding is requisite, but when united with hardness, no additional evidence of its necessity

can be wanted; therefore, never bleed where there is a quick pulse, unless at the same time it be a hard one. The indication for a repetition of blood-letting is said to be a buffy state of the blood, but your decision must not be governed by this appearance, you must still have a hard pulse. When blood is cupped it is said to be a proof of strength, and that bleeding should be repeated; the following case, however, will show that even a cupped state of the blood and buffiness conjoined are not sufficient evidence to warrant a conclusion that venesection may be repeated. A man at Guy's Hospital, in the last state of scurvy, and whose blood-vessels were so weak that a very slight pressure upon the skin produced ecchymosis—whose gums bled frequently, and whose pulse was exceedingly feeble and quick—had taken from his arm, at my request, a very small quantity of blood, by way of experiment; after standing for a few hours, it became not only buffy but exceedingly cupped.—When, therefore, you employ bleeding, it may be of importance to you to keep this experiment in your remembrance.

The quantity of blood which should be drawn at a time, in inflammation, must depend entirely on the severity of the complaint.

The proportion of blood, compared with the solids, which can be drawn from an animal before it dies, is about one pound to sixteen. I ascertained this fact in the following manner:—I took a small dog, weighing fourteen pounds, and opened his jugular vein; in this way eleven ounces were discharged, when the dog fainted. I then opened the carotid artery, and from this source obtained three ounces more. Thus fourteen ounces of blood were drawn from a dog weighing fourteen pounds; so that one ounce of blood to sixteen ounces of the solids is about the correct proportion.

When you bleed to relieve inflammation, the blood should be abstracted as rapidly as possible; therefore, the orifice made into the vessel should be of considerable size; for, if it be allowed to run slowly, the vessels have time to accommodate themselves to the diminished volume of circulating fluid; so that the system scarcely receives any shock when blood is abstracted in this gradual manner. The grand object, indeed, is, to pro-

duce fainting; to effect which, blood must be suddenly withdrawn.

You may bleed so as to produce constitutional and local effects at the same time. A patient of Mr. Foster's, in Guy's Hospital, who had a concussion of the brain, was bled in the external jugular vein; immediately after the operation, the pain of the head ceased, and the irritable fever disappeared.

When you have accidents brought to you which will require a long time for their recovery, you must be exceedingly careful how you take away blood from the general system, but must adopt in these cases local depletion; for if, as I have before remarked, you take away from the constitution too much of the vital fluid, Nature will be unable to execute the usual processes for the restoration of the injured parts; the most disastrous consequences, in such cases, follow the indiscriminate employment of blood-letting; and there is not to be found, in the whole range of surgical practice, a greater error than this.

The second mode of relieving inflammation is by restoring the secretions; for whenever it occurs, at least in any violent degree, all the secretions are diminished or suppressed. The most important secretions are those of the liver, intestines, skin, and kidneys; and, when these cease to perform their proper functions, irritative fever is the consequence. A deficiency of secretion in the alimentary canal is the cause of a great many of the diseases to which human beings are subject. The internal surface of the intestines is lined with glands; the tube itself, on an average, is twenty-seven feet in length, and three inches in circumference; thus there are here about a thousand inches of surface, from which, in health, continual secretion proceeds. What then must the result be of allowing such an extensive surface to remain inactive?—Of course, the production and continuance of irritation and fever! To excite the intestinal canal to action, therefore, should be one of our first objects. This may be done by purgatives; and they afford relief in nearly the same manner as the abstraction of blood from the arm; for a pint of serum will frequently pass off with feculent matter, after taking a cathartic. Purgatives have likewise another good effect, independently of restoring the secretions from the in-

testinal tube, viz., that of carrying off whatever feculent matter may be lodged in the intestines; but I do not believe that much irritation is produced by the accumulation of fæces in comparison with that which takes place from a stoppage or deficiency of the secretions. I have met with several cases in which a vast quantity of fæces had collected, yet little constitutional irritation was produced; similar cases frequently come under the observation of accoucheurs. In one instance, which I met with, the pressure from the fæces was so violent that it produced ulceration into the vagina; yet the amazing quantity of feculent matter excited but little constitutional irritation. Some fluid formed a passage by the condensed mass, and was daily discharged; this, in a great measure, accounts for the absence of irritative fever.

That it is from the check to the secretions that irritative fever arises, is proved by what happens in children during dentition. They are sometimes put to bed quite well, but in the morning half of the body is paralysed from the irritation of a tooth. The secretion from the intestines stops, fever is excited, which produces a hot and dry skin; but restore these secretions, by the administration of purgatives and antimonials, and the irritative fever soon subsides, although the paralysis will sometimes continue with little alteration for life.

There is another mode in which purgatives produce a beneficial effect in inflammation, that of irritating the intestines. Blood is determined to them, and is therefore drawn from the part inflamed, upon the principle that two increased actions are with difficulty kept up in the body at the same time.

It is of no use to act on the intestines in inflammation, without also exciting the liver; therefore, give calomel with your saline medicines, but don't give salines alone!—the best plan is to give calomel at night, and a saline in the morning. An excellent aperient for adults is one grain of calomel, with four of cathartic extract; or two of blue pill, with three of cathartic extract. Castor oil may also be recommended; and, as another safe opening medicine, you may prescribe infusion of senna, with Epsom salts. In children, calomel, with rhubarb, scammony, or antimony, may be ordered as aperients: and in addition to these means, the

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use of injections, and the warm bath, are the best means of restoring the secretions of the digestive organs.

An old Scotch physician for whom I had a great respect, and whom I frequently met in the city, used to say to me, as we were about to enter our patient's room together, "Weel, Misther Cooper, we ha' only twa things to keep in meend, and they'll searve us for here and herea'ter; one is auways to ha' the fear o' th' Laird before our e'es *(a laugh)*, that 'll do for herea'ter; and th' t' other is to keep our boo'els auways open, and that 'll do for here." (*a laugh.*)

The methods by which I preserve my own health, are temperance, early rising, and sponging the body every morning with cold water immediately after getting out of bed, a practice which I have adopted for thirty years; and though I go from the hot theatre into the squares of the Hospital, in the severest winter nights, with merely silk stockings on my legs, yet I scarcely ever have a cold. Should it happen that I feel indisposed, my never-failing remedy is one grain of calomel combined with four of cathartic extract, which I take at night; with a bason of hot tea, about two hours before I rise the following morning, in order to excite a free perspiration, and my indisposition soon subsides.

The next secretion we should restore, for relieving irritation and inflammation is that of the skin; for it rarely happens that a hard pulse continues with a free secretion from the surface of the body.

The best mode of producing perspiration is, by giving the antimonial powder with diluents, or Dover's powder: as this powder, however, is apt to increase costiveness, the antimonials are the best, and these should be combined with mercurials.

The other secretion, namely that of the kidneys, may be restored by giving diluents, squills, or acetate of potash.

Now, gentlemen, be assured it is not by restoring this or that secretion, which will relieve extensive inflammation; for it cannot be effected but by the complete restoration of them all.

There are some cases of inflammation where bleeding will not afford relief; this more frequently happens in inflammation of the testicles than in any other parts; for these affections you must administer Dover's powder, combined with calomel.

There is another mode of subduing inflammation, namely, provoking in the stomach a constant nausea by giving a solution of emetic tartar. I have seen this plan successfully practised on children in croup; calomel should be also occasionally administered.

In inflammations of old people you must bleed with great caution. I was requested to see an elderly lady in the country, having inflamed lungs; I ordered her to be bled,—the bleeding was repeated, when her legs began to swell; I therefore prescribed the digitalis and the spir. æth. nitrici; it reduced the pulse, caused the absorption of the effused fluid in the legs, and she rapidly recovered. This medicine reduced the inflammation, and at the same time increased power.

The means, therefore, which are employed to lessen or remove inflammation, are those which restore the secretions, by opening the extremities of the arteries; and thus the heart is prevented from propelling a quantity of blood with violence to any particular part of the body.

COMPOSITIONS OF QUACK MEDICINES.

Cheltenham Salts.—Glauber's salt, Epsom salt, common salt, of each twenty-eight pounds; dry in an oven, and powder: purgative.

Plummer's Pills.—Calomel, precipitated sulphuret of antimony, of each one drachm; gum guaiacum, two drachms; balsam of capivi, a sufficient quantity; divide in five-grain pills.

Ward's Paste for Fistula and Piles.—Black pepper, elecampane root, of each one pound; sweet fennel seeds, three pounds; honey, white sugar, of each two pounds; dose the size of a nutmeg, three or four times a day.

Marshall's Cerate.—Palm oil, five drachms; calomel, one ounce; sugar of lead, half an ounce; ointment of nitrate of mercury, two ounces.

Common Dutch Drops.—Flower of sulphur, four ounces; oil of turpentine, eight ounces: dissolve.

Norris's Drops.—Emetic tartar dissolved in rectified spirits of wine, and then coloured.

British Oil.—Oil of turpentine, eight ounces; Barbadoes tar, four ounces; oil of rosemary, four drachms.

Keyser's Pills.—Acetate of mercury, four ounces; manna, thirty ounces; starch, two ounces; mucilage of gum tragacanth, a sufficient quantity; make into pills of six grains each; dose, two night and morning, increasing the dose to twenty-five or more: a box of one thousand or twelve hundred pills is usually sufficient for the cure of a common case of syphilis.

On the Effects of Stricture of the Urethra, particularly of the saculated State of the Bladder; with an Inquiry into a Mode of Treatment to avert this latter consequence of Stricture, which is often fatal. By JOHN SHAW, Esq.—Read Feb. 25, 1823.

[From the Medico-Chirurgical Transactions.]

THE opinion prevails more generally now than at any former period, that the improvements made in surgery have resulted from the methods of investigating the nature of diseases, by comparison of the healthy organs with the same parts in a morbid state. This induces me to hope, that the proposal to examine in this way a disease more common, and therefore more interesting, than many which have engaged the attention of the profession, will be favourably received by the Society.

The disease to which I allude is Stricture of the Urethra; a disease which may be considered particularly interesting, not only because it is very common, but at the same time the most difficult to treat successfully; while, if the condition of the parts be not thoroughly understood, it often proves fatal. Our interest in it is also increased by the knowledge, that if we pursue a plan of treatment founded on correct notions of the anatomy and pathology of the urinary organs, we may not only rescue many patients from the most severe sufferings, but also offer well-grounded hopes of a permanent cure. By a correct and safe practice, founded on a knowledge of anatomy, the surgeon has it in his power to confer greater and more lasting benefit, than can be promised after the most brilliant and successful operations on a greater scale.

I shall not at present describe all the effects produced by stricture, but confine my observations to four distinct pathological facts; each of which, however, I trust, will be considered worthy the attention of the Society.

1st. I have not, in more than a hundred dissections which I have made of diseases of the

urethra, seen a stricture or narrowing of the canal, posterior to the ligament of the bulb; nor have I been able to find one example of stricture beyond this part among those preserved in the College Museum.

2d. In almost every instance where a narrow stricture has existed for some time, in any part of the urethra anterior to the ligament of the bulb, I have found the membranous and prostatic portions dilated to three or four times their natural size.

3d. The ducts of the prostate, which are naturally very small, are always more or less enlarged when there has been a stricture, or a long-continued irritation of the canal.

4th. When such a stricture as causes occasional retention of urine has existed for some years, the bladder is found to be not only thickened, but often at the same time sacculated.

I shall now endeavour to show the importance of collecting facts which shall either substantiate or invalidate the accuracy of these observations.

In doing this, my principal object will be to bring before the Society certain facts regarding the sacculated state of the bladder, which have not, as far as I can learn, been hitherto noticed; but previous to doing this, I may, perhaps, be permitted to offer some remarks upon certain practical questions connected with the observations just made, and which, though of daily occurrence, do not seem to have met with that attention which their importance merits.

If the first three observations are correct, certain important practical rules may be deduced from them. First, if, in examining a patient who has symptoms of stricture, the instrument is obstructed at a point posterior to the ligament of the bulb, we ought not to attribute the impediment to a narrowing or stricture of the passage, but to some other cause; to one which will not be removed by such means as are available in the case of stricture. If the second observation, that the membranous and prostatic parts become enlarged in consequence of stricture, be correct, it will be admitted as a consequence, that if a bougie be obstructed posterior to the bulb, in a patient who has previously had stricture in the anterior part of the urethra, there will be still less probability of the obstruction to the passage of the instrument through these parts

being caused by a narrowing or stricture of the canal.

The rule obviously deduced from these facts is, that, on feeling an obstruction posterior to the ligament of the bulb, we should not persevere in the attempt to push the instrument farther in.

To this rule we shall perhaps be inclined to assent, when we consider that such an obstruction, though an impediment to the entry of the instrument, will probably be none to the passage of the urine from the bladder; and, moreover, that it is questionable whether carrying an instrument along the dilated part is always beneficial to the patient.

The importance of recollecting these facts will be still more obvious, if the truth of the third observation be admitted; since, in consequence of the enlargement of the ducts, it is highly probable, that if the instrument has not been obstructed by certain natural impediments, it has passed into one of the dilated ducts. If this should happen, and if the attempt to push the instrument into the bladder be persevered in, a false passage will probably be formed. The enlargement of the ducts, and the consequent difficulty of passing an instrument through the membranous and prostatic portions, in cases where there has been a stricture in the anterior part of the canal, is well illustrated by the preparations on the table, and particularly by No. 50, *a*. in which a complete labyrinth is formed by the enlarged ducts, and by membranous bands, both of which are evidently the consequence of the narrow stricture behind the glands.

If the catheter enters into one of the enlarged ducts, it may be pushed through the prostate into the back part of the dilated bladder: indeed several preparations, illustrative of this accident, have been preserved in the Windmill-street Museum, and are now upon the table of the Society.

The importance of exhibiting these examples to the Society is proved by the fact, that even at the present day the authority of Desault is given for using forcible means to overcome obstructions, which he describes as the consequence of the narrowing of the prostatic part of the urethra.

As the proofs afforded by the preparations on the table will be, perhaps, considered sufficient to show the impropriety and danger of the attempt to overcome by force

the difficulties opposed to the introduction of an instrument after it has passed the ligament of the bulb, I shall not take up the time of the Society by dwelling more upon the subject, nor shall I here enter upon the very important question, of the propriety of using force to overcome obstructions in any part of the canal*.

I shall now beg leave to draw the attention of the Society to a question connected with the anatomy of that part of the urethra which is surrounded by the ligament of the bulb, during its healthy state, but more particularly while suffering under a slight attack of inflammation.

From a drawing of the natural form of the canal, we see that it becomes suddenly narrow at the bulb. This abrupt diminution of the calibre of the urethra must of itself be a cause of difficulty in passing an instrument. If to this we add the obstruction occasioned by the natural curve of the canal being here likewise suddenly changed (for the ligament is higher than the sinus of the bulb), we shall admit that the mechanical impediments to the introduction of an instrument are greater in this point than at any other.

The accuracy of this observation will be acknowledged by those who have superintended the operations of students, as it is invariably at this part that they are foiled in their first attempt to pass a catheter in the dead body.

If to these impediments, we add the difficulty occasioned in the living body by the contraction of the muscles which surround this part of the urethra, and which is always excited by a slight inflammation of the membrane, we shall understand how the spasmodic affection which comes on the moment a bougie touches the inflamed part, combined with what I have called the mechanical difficulties, may produce so complete an obstruction to the entry of an instrument as to give rise to the idea of the presence of stricture.

Here I ought also to state a fact, which, if it occurs under the circumstances just mentioned, may be an additional source of error to one not fully acquainted with the natural structure of the parts. When a bougie is obstructed at the bulb, its upper surface may

* This question is discussed in the Notes made by me to the last edition of the work "On the Diseases of the Urethra, by Mr. Charles Bell." See particularly the note, p. 156.

be so cut or indented, by being pressed against the lower edge of the ligament, as to have exactly the same appearance as that which has been considered as an unequivocal proof of there being a stricture at the point where the instrument has been stopped. Indeed, so great is the chance of a mistake occurring in consequence of one or other of the above causes, that we are induced to consider many of the histories given of the sudden cure of narrow strictures at the bulb by bleeding, antispasmodics, &c. as only so many examples of the difficulty of understanding this disease, without a perfect knowledge of the anatomy and pathology of the urethra.

The circumstances mentioned above also form good grounds for suspecting that many of the strictures at the bulb have originated in the inflammation consequent upon the ineffectual attempts to pass an instrument through this part of the urethra, while the internal membrane is in a state of irritation.

The question regarding the sacculated state of the bladder involves so many important considerations, that I shall not presume to offer more than some general remarks upon it, in the hopes of exciting attention to the subject.

All who are familiar with the appearances of stricture upon dissection, will acknowledge that a sacculated state of the bladder is a very common occurrence; I have so frequently found it, that I have been led to the following conclusion (and which has not been hastily formed, as the preparations on the table will testify):—if a very narrow stricture has existed for a certain time, and the patient has suffered occasional attacks of retention of urine, a sac has probably formed.

This observation I confidently make, though at the same time I acknowledge, that I cannot with accuracy point out any particular symptoms, by which we may predict the formation of a sac; I will, however, hazard the opinion that, when in severe cases of stricture there is a peculiar irritation about the back part of the bladder, and between it and the rectum, especially if this occur after voiding urine, we may suspect that a sac has formed.

The following questions naturally occur to us. If a sac has formed, is it ever spontaneously removed? Is it not probable, that a certain quantity of urine will generally lodge in the sac? What will

be the consequences of the lodgment of urine?

The difficulty of determining whether certain symptoms are produced by the presence of the sac, or by some other cause of irritation, will make it almost impossible to resolve with certainty the first question; the second, I fear, must be answered in the affirmative; and in reply to the third, and most important, I would be inclined to say, that the lodgment of urine in a sac produces a very peculiar train of symptoms, constituting a disease that is often fatal, the patient's death being occasionally preceded by symptoms of peritonitis. I have also observed, that the sufferings of the patient are of a very different nature from what are considered the more common consequences of stricture. The cases upon which I have founded these observations I shall not at present detail, my object being to direct others to the question; I may, however, again refer to the preparations on the table, as showing that I have not made the statements without sufficient evidence that a sacculated state of the bladder is a frequent consequence of stricture *.

* There is another question connected with the sacculated state of the bladder, which is too important to be more than alluded to in this inquiry, viz., whether there is not much danger of calculi being formed from the urine lodging in the sac?

Several specimens of stones in sacs of the bladder are placed upon the table; but I am not prepared to say whether the sacculi in these examples were formed in consequence of stricture of the urethra, or of the irritation under which the bladder of a person with symptoms of gravel generally suffers. It cannot, however, I presume, remain a question, that the formation of stone is to be considered as one of the dangers attendant upon a sacculated bladder, whatever may have been the original cause of the sac being formed.

DISSECTION.

A few days since, a surgeon died from a wound received while engaged in dissecting a subject. It occurred at Bath. A drayman picked up a large needle, and stuck it into the breast of his smock-frock.—While afterwards engaged in his labours, a cask or something came against the drayman, and forced the needle into his person with so much force, and to such a depth, that it could not be extracted, nor could the unfortunate man pursue his work. Slight as the cause was apparently, this accident occasioned the man's death: he soon became seriously ill, and no art could extract the needle, or save the individual's life. After his death, the assistant-surgeon was desirous of dissecting the body, and particularly

of ascertaining the station of the needle, which had produced mortification and death. Of course, the part surrounding the needle was the most important object of dissection; and while engaged in dissecting such portion of the body, the assistant surgeon rather slightly cut his finger. This wound could not be cured; in two days, the left arm swelled considerably, and in a day or two afterwards mortification ensued, terminating in death.

ANATOMICAL INVESTIGATIONS.

THE numerous obstacles which have of late years been thrown in the way of anatomical pursuits in this country, are of so serious a nature, and likely, if not soon removed, ultimately to put an end to the study of anatomy altogether, that we think it of the highest importance coolly and dispassionately to discuss the subject, for the purpose of inducing our professional brethren to do all in their power to eradicate the prejudice that unfortunately exists against it, and of convincing the public at large of the injurious consequences which would ensue, if so useful a branch of knowledge were not to be cultivated. The value of any art or science will be determined by the tendency it has to increase the happiness, or to diminish the misery, of mankind. In how great a degree a knowledge of anatomy can effect either of these objects we shall now proceed to inquire.

Anatomy may be said to have two divisions: the first, which teaches us the condition of the different parts of the human body in health; the second, commonly called morbid anatomy, by which we become acquainted with the nature of the changes which take place in those parts from disease. A student, on commencing his anatomical studies is informed, first, of the existence of parts of which, perhaps, he had never before heard; and having acquired a knowledge of their existence, then proceeds to learn the different circumstances relating to them—as their situation, external appearances, use, &c. As for instance, a student, on examining a body for the first time, sees, in the cavity of the abdomen, a bag or pouch, distended, or not, as it may happen; he asks what it is; he is told it is the stomach. He marks its situation, colour, figure, and texture; and then, from a knowledge of these circumstances, is led to inquire

respecting its use. This, we are aware, is not to be learnt from dissections only;—other means must be had recourse to, which, however, would never have been suggested, if the anatomy of the organ had not been thoroughly understood. Again: a student dissects the integuments from the front of the chest; he sees a muscle, is informed of its name, learns its origin, insertion, use, and the direction its fibres take, and so on of the different parts and organs of the human body. A knowledge of this part of anatomy is of use in two respects; first, without it nothing can ever be known of morbid anatomy; and without morbid anatomy, as we shall presently shew, the nature of disease can never be understood; secondly, it is indispensable to the treatment of many surgical cases, and the performance of most surgical operations. Let us take, for example, a simple fracture of the bones of the leg; look at the treatment of such a case by a man ignorant of the principles of practice, and which principles can only be accurately applied just as he may be acquainted with the origin and insertion of the different muscles exerting an influence on the fracture, in order that he may place them in a passive state, and by that means be enabled to keep the ends of the bones in accurate opposition; without some such knowledge, the sufferings of the patient might be prolonged to an indefinite period, and fatal consequences in the end result from what, under proper management, would have terminated well. These observations apply equally to most cases of fractures. By persons ignorant of the bones and muscles in the neighbourhood of joints, dislocations will seldom be detected, or ever reduced; and thus cases which, with a proper degree of skill and attention, are perfectly simple and easy of treatment, will, without it, be attended with the most serious results to the unfortunate sufferers. As for surgical operations, it would be as natural to expect an individual who had never learnt or heard a word of German in his life to read and talk that language, as it would be to think that a surgeon could operate on parts, of the anatomy of which he was entirely ignorant; the one case is not more preposterous than the other. Life, in many cases, depends on the prompt performance of surgical operations: these are the only means by which it can be saved; yet, if a surgeon has not had

the power of acquiring anatomical knowledge, death will occur; when, by one acquainted with the subject, it might easily have been prevented.

We have now been considering a knowledge of the state and situation of the various parts of the human body in health;—we have alluded to its importance, as far as relates to a clear conception of the changes which take place from disease, and have spoken of its importance, as far as concerns the mechanical treatment of various accidents, and the performance of certain mechanical operations. We shall now proceed to the consideration of a still more important part of the subject, we mean Morbid Anatomy, which every scientific surgeon and physician will studiously cultivate—as, by an acquaintance with it, the former will know when operations ought to be performed, and when to be avoided; and the latter, that on it alone could be founded any rational knowledge of the nature and treatment of disease. Any one who takes a survey of the history of medical science, will be struck with the diversity of opinion that has existed in all ages respecting disease;—theories out of number, on almost every disorder, have been put forth, which lasted for a time, and then passed away, and are only mentioned at present to illustrate the ignorance of the ages in which they were invented. But, on an examination into the cause of this continual change of opinion on medical subjects, it will not be found very difficult of solution: a theory is good or bad, in proportion to the extent and correctness of the facts and observations on which it is founded. On what were the theories to which we have before alluded founded? On mere conjecture in most cases; and in others, on the most narrow observation.—Within a very few years, opinions equally absurd as those of the ancients were held by individuals in this country;—they are, however, dying away. A change has taken place; and to what can we attribute it, if not to more accurate views of pathology obtained by means of morbid anatomy? Look at any part of the field of disease: take fever, for example, and see the light which has of late years been thrown on it. An intelligent practitioner will go to the bed-side of a patient labouring under fever, regardless of the name by which it is called, seek for the part or parts affected, endeavour to discover the nature of the af-

fection, and then taking into consideration all the circumstances of the case, will treat it accordingly. Look at puerperal fever, in which the mortality used to be nine in ten at the least; but since the nature of the disease has been so well understood, by means of morbid dissections, the case is reversed, and no one acquainted with the principles of practice ought now to lose more than one in ten. (Vide *Medical Intelligencer*, vol. i. p. 151.) We might go over the whole range of the diseases that are known, and though some are still very obscure, yet the improvement which has taken place in others, and the means by which it has been effected, are quite sufficient to convince any one, that in proportion as this branch of knowledge is cultivated, so will the obscurity and uncertainty attending disease be removed.

It will scarcely be necessary to say, that by repeated dissections alone can a knowledge of anatomy be acquired. Anatomical plates and preparations may assist, and some aid may be obtained from comparative anatomy; but it is from the dead body alone that real anatomy can be learnt: and let those whose indignation is sometimes raised against persons pursuing this branch of knowledge only reflect for a moment on the nature of the pursuit, and they will soon be persuaded that it is only from absolute necessity that it is followed, from the impossibility of learning the surgical science without it. In addition to the labour necessary to understand and remember what is dissected, there is the unwholesomeness of the occupation, and the danger incurred even by the most careful, from accidents, which, in a broken-up constitution, not unfrequently prove fatal. Morbid anatomy is to be learnt from *post mortem* examination of individuals who had been labouring under disease: to render it of much use, the previous history of the case should be known; and this cannot be done, unless the symptoms were accurately recorded at the time they were apparent;—on histories collected from friends, and written from recollection, very little dependence, comparatively speaking, can be placed. These remarks apply equally to accounts of *post mortem* examinations, which should be recorded at the time they were made, or as soon after as possible.

Having considered the object of anatomical knowledge, and the only means by which it can be acquired, we shall

now say a few words on the difficulties experienced in obtaining subjects for dissection.

Bodies, in this country, can only be obtained at present in two ways; first, in cases where individuals have been executed for murder; and secondly, by stealth.

During the reign of Geo. II. an act was passed, ordering the bodies of those executed for murder to be given up for dissection. Now the inefficiency of the means granted by this law to pursue anatomical knowledge must be apparent to every one; the number of persons executed in England and Wales, from 1805 to 1820 inclusive, amounted to 1150; allowing half of this number to have been dissected, there would only have been 575 bodies allowed by the law to supply the profession with anatomical knowledge during sixteen years, when every year about a thousand students come to town for the purpose of acquiring a sufficient portion of surgical knowledge to serve them during their whole lives. But we are not quite certain that the insufficiency of the supply is the only evil; the law only allowing bodies of malefactors to be dissected stamps an obloquy on the act of dissecting, which, under existing circumstances, will do more mischief to the cause than any slight advantage to be derived from such a scanty supply. The second mode is by theft. We have shown above, that surgery as an art cannot be beneficially practised, nor surgery and medicine be studied as sciences, without a knowledge of Anatomy; and as surgery and medicine are indispensable to the cure and alleviation of disease, and will be studied as long as health continues to be an object of desire, persons will be found, there is no doubt, to undertake to get bodies at any risk. The evil effects of enacting into a crime what is absolutely necessary are very serious; by that means many individuals are disqualified from keeping laws which it is desirable should be respected, and by this mode a government inflicts punishment for crimes which it has been the means of erecting. Mr. Abernethy, in his introductory Lecture this season on Anatomy, alluding to the difficulties experienced in this country in procuring bodies for dissection, said, that it was a national disgrace. Truly might Mr. Abernethy say it; it is a disgrace to every country to suffer laws to exist which are opposed to the

general good, and such are the present laws against the procuring of bodies. Bad laws may remain unrepealed from one of two circumstances, or perhaps from both combined: first, because the people do not see the evil tendency of the laws; and secondly, seeing their evil tendency, they have not the immediate power to repeal them. In our country, the laws against obtaining bodies evidently remain unrepealed from the first of these causes.

In one word, it being admitted that the science of Anatomy is in a pre-eminent degree conducive to the happiness of mankind, and also that dissection of subjects is the best means of acquiring a knowledge of the science, it would be desirable to this end, that subjects should be obtainable with the least possible difficulty. The legislature then should never interfere but to promote the facility of obtaining subjects, excepting in cases where individual security would become affected; for instance, when they are procured by abstraction from any enclosed burial place, supposing popular opinion to be against any such deed, the legislature should apply the least possible punishment. Government ought to exert itself to remove from the minds of the people all prejudices which have a tendency to destroy the general happiness of the nation.

CHEMICAL DISCOVERY.

M. Dobereiner, Professor of Chemistry in the University of Jena, gives an account of a discovery of the greatest importance. By a series of entirely new experiments, he has ascertained that platina, the heaviest of all elementary substances, when reduced into very fine particles, produces, by simple contact with hydrogen gas (the lightest of elementary substances), an electrical or dynamic combination, which, if brought into contact with hydrogen gas or with atmospheric air, instantly dissolves itself, yielding fire and water. To prove this important fact by a brilliant experiment, M. Dobereiner makes hydrogen pass from a reservoir, by a capillary tube, curved below, upon pure platina in powder, which is confined in a glass tunnel, hermetically sealed at the point, so that the gas mingles with the atmospheric air before it touches the platina. The moment that the current of gas reaches the surface of the platina, the powder of that metal becomes red and burn-

ing, and this phenomenon continues as long as the stream of gas is directed upon it. This fine discovery will open a new field for physical and chemical researches.

SIMULATED DEATH.

A VERY extraordinary case of this nature occurred a few days ago at Hammersmith, in the person of Harriet Smith, a young woman of interesting appearance, who served as housemaid in the family of Robert Emmerson, Esq., of Oxford-street. This girl, it seems, had about three years ago been thrown from the top of a stage coach, and received many severe contusions, both internally and externally, which seriously affected her strength, and brought on a gradual decay of nature. Being incapable of performing her customary business, she relinquished her situation, and obtained an asylum beneath the roof of a female relative at Hammersmith. Here, notwithstanding her total cessation from all corporeal labour, her complaint still advanced; she every day grew weaker, and was frequently subject to long faintings. Through the kind attention of some ladies with whom she had formerly lived, every aid that eminent professional advice could afford was rendered to her, with a constant supply of such necessaries and comforts as her helpless situation demanded. On Thursday week, she had been taken out for an airing, and returned home with renewed strength, and in rather better spirits than usual. After taking some refreshment, she complained of excessive inclination to sleep, and was therefore placed in bed betwixt the hours of six and seven in the afternoon. In apparent enjoyment of profound repose, she remained until a very advanced hour the following day, when, on attempting to arouse her, she was found to be quite cold; her lips were colourless, and her eyes glazed; all pulsation had ceased; every thing bore testimony to the power of the fell destroyer—death. The last offices to her remains which are directed by decency were then performed; the corpse was attired in the usual grave-clothes, and laid on a bed, where it remained from Friday noon until Sunday morning, the afternoon of which day was fixed for the interment. Happily, however, the horrible event, which we fear occurs but too often, was frustrated. On the removal of the body from the bed to the

coffin, one of the persons engaged, accidentally placed her hand on the bosom, and fancying its touch imparted a sensation far more warm than the damp and clayey feel of a corpse, she naturally expressed her opinion to those who were assisting in the melancholy office; a closer examination convinced them that they were about to commit to the cold grave a living subject. The cheeks and lips were still livid and colourless; the eye exhibited no sensation of vision, but the vital principle reigned about the region of the heart, and on the application of a glass, breathing was once more perceptible. The physician who had attended during her illness was instantly sent for; on his arrival, signs of returning animation were so manifest, that he concluded bleeding and the application of warm bricks would be productive of immediate restoration. He therefore opened a vein, first in one arm, and then in the other, but without effect; every other effort proved equally unavailing, until about five o'clock in the evening, when a rapid change took place; the throbbing of the heart and the pulse became perceptible, the cheeks and lips partially regained their crimson, respiration returned with ease and vigour, and in a few moments all the anima. powers assumed their functions. During the interesting interval, the various insignia of death were removed, in order that she should not be terrified by their appearance when perception returned; but being questioned as to her health, in the customary manner, she manifested no knowledge of what her situation had been, merely saying that she felt cold and weak, with an extraordinary oppression, and a sensation of fear, not unlike that which is experienced in dreams, when afflicted with the complaint commonly called nightmare. She has improved, not only in health, but in spirits, every day since, and is now likely to be long an inhabitant of this world.

LECTURE V.

I SHALL first speak of the *Treatment of Chronic Inflammation.*

The remedies employed in this affection must have a slow and gradual action on the secretions, you cannot take this disease by storm; and, if your medicines are attended by violent actions, you will do harm

instead of good. The principle on which this disease depends is the same as in acute inflammation, *viz.*, the arrest of the secretions. Chronic inflammation is frequently produced through the influence of the mind: thus, long continued grief will completely stop the secretion of bile; again, loss of appetite, from a deficient secretion of gastric juice, is often occasioned by anxiety of mind; and even an ulcerated state of the stomach has been produced by a long continuance of the same cause. But let what will cause the stoppage of the secretion, some enlargement will be the result; as swelling of the liver, of the testicles, or of the joints; the formation of common tumours, as the fatty,—or those of a specific kind, as the fungous.

In diseases of a chronic kind, give calomel and opium; and I cannot point out to you a better example of their good effects than is observable in chronic inflammation of the iris. A person comes into the hospital with iritis; he has a zone of red vessels round the cornea, on the sclerotic coat, and there are red or yellow spots on the iris; if the complaint had been violent, the spots are red, from their having become vascular. You give this patient five grains of calomel, and one grain of opium, twice a day for a fortnight, and he generally gets well. Yet this disease was formerly considered incurable. If the patient be a female, or of a delicate constitution, then two or three grains of calomel will be found sufficient; and when the mouth becomes decidedly affected, you will perceive an alteration in the appearance of the iris, when you should lessen your dose; a profuse salivation is not necessary, and, if long continued, would aggravate rather than relieve the local disease.

The most common medicine. and probably as a general one the best that is administered in chronic inflammation, is Plummer's Pill; it acts at one and the same time on the secretions of the liver, intestines, and skin, and if you can succeed in restoring these, the disease, if recent, will soon disappear; the absorbent vessels are roused into a state of increased activity, and the effects of the chronic inflammation are removed.

Another excellent medicine for the cure of chronic complaints, is the oxymuriate of mercury, combined with the compound decoction of sarsa-

parilla. In the hospitals we merely give it dissolved in rectified spirits of wine; about one-eighth of a grain, in half a pint of the decoction, to be taken in the course of a day; one-half in the morning, and the other in the evening; continue it as long as you think necessary, taking care to watch its effects on the gums; always keeping in mind, that mercury given to excess will tend to increase, rather than destroy, constitutional irritation. As sarsaparilla seems to possess the power of lessening irritability, we frequently give it with mercury, in the way I have just mentioned; it is a medicine which has often a most extraordinary effect on opacities of the cornea, and may be prescribed, in even very bad cases, with the greatest prospect of success. A girl from Sheerness was in Guy's Hospital some time since, in whom the opacity was so great, that she was nearly blind; quite so in one eye: the usual remedies employed in similar cases were tried, without obtaining the least benefit; she was then recommended the compound decoction of sarsaparilla, with the oxymuriate of mercury, and in a short time she recovered her sight.

The best alterative for the removal of chronic disorders in children, is one grain of the *Hydrarg. cum Cretâ*, and two or three grains of powdered rhubarb, mixed together, and given night and morning: this compound is exceedingly mild, and will have a particularly benign influence on the liver and intestines. One grain of oxymuriate of mercury, dissolved in an ounce of tincture of bark, and from ten to fifteen drops, according to the age of the child, being given twice a day, will likewise be found a very valuable medicine. It is said, that the mercury is decomposed by the bark; but, whether it be so or not, it is attended with so many good effects, that I shall continue to prescribe it; and especially in those cases where there is enlargement of the mesenteric glands. Calomel and rhubarb, the hydr. cum cretâ, and soda, will also be found medicines of much power in the chronic diseases of children.

Lastly, as it is not advisable to give these little creatures mercury, if it can be avoided, a medicine, composed of two grains of rhubarb, and five grains of the carbonate of iron, given two or three times a day, will often render its employment unnecessary: this

medicine acts as an aperient and powerful tonic.

The nature of inflammation I hope you all now thoroughly understand; recollect that the vessels of the part are in a dilated state, and the surrounding ones have an increased action.

I shall next speak of

The local Treatment of Inflammation.

Much has been said about the application of cold in these affections. People have been arguing about words rather than ideas, but it really is not worth while to attend to such fastidious, nonsensical objections as have been started against this remedy. Though cold is not a positive agent, yet it is capable of affording great relief in inflammation—first, by lessening the size of the vessels—secondly, by lessening action, which it effects by diminishing nervous irritability. If cold be applied to the system generally, it has the power of lessening the frequency of the pulse in an extraordinary degree. I have tried this upon myself. I went out of my house one evening into the garden when warm, my pulse being 86; at the expiration of an hour it was 76; at the end of two hours, was reduced to 65; and had not only lessened in quickness, but also in fulness. Cold will produce torpor, and even death.

A curious instance of this kind occurred near Halifax, in Nova Scotia: Dr. Scott had been dining a little way in the country with some friends; and they were on their return at night, when one of the party separated from the rest, saying to a companion, that he would frighten some of them by-and-by. However, they reached Halifax without seeing any thing more of him. At this the party became alarmed for his safety, and returned for the purpose of finding him. He was discovered behind a hillock of snow, in an erect position, but quite dead.

Another curious instance of this kind is related in Cook's Voyages, when some of the officers and crew of one of the ships were landing at Tierra del Fuego. Dr. Solander, who was of the party, particularly cautioned them not to go to sleep; and said that it was exceedingly dangerous to do so in cold situations. It happened, however, that the Doctor was himself the first who became drowsy; it was with the greatest difficulty that his companions could keep him in motion; and it was only by the utmost perseverance that they

succeeded in getting him back to the ship alive.

When cold is applied to an inflamed part, it lessens its nervous energy, and robs it of its heat; but cold must be severe indeed, if it bring the *internal* parts of the body below a temperature of 98°. In this country, in the winter, many of the *external* parts of the body vary in temperature from 20° to 30°; thus a thermometer applied to the toes when they are cold, will be found to indicate 20° of heat less than it would do, if applied to the calf of the leg.—Cold applied in excess destroys life; by abstracting heat, without which the vital actions cannot be supported.

On the living body you may apply cold to a part until it actually becomes frozen. Mr. Cline and Mr. Sharp were once attending a patient who had strangulated hernia; to reduce which they applied ice enclosed in linen cloths, and this they continued for thirty-six hours: now as the ice dissolved, the water formed by it ran down upon the man's groin, and the inner side of his thigh, and the parts whereon this stream passed, became completely frozen; proper applications restored them to life; but inflammation and slight mortification succeeded: the hernia, however, was reduced, and the man eventually did well. In similar cases I advise you to apply ice in a bladder; and take care that you do not continue it too long.

It frequently happens in this country, during severe winters, that the lobes of the ears and tips of the noses of those who are much exposed to the weather will become frozen: they may be restored to life by rubbing them with snow.

One of the best lotions that can be applied to an inflamed part is composed of one ounce of rectified spirits of wine, and five ounces of water. Goulard water is also much extolled for reducing inflammation, and lessening pain; but when too long applied, or too strong, it has been known to destroy nervous irritability in too great a degree. Mr. Foster, of Guy's, saw a person in whom the upper eye-lid became completely paralysed from its improper application.

In applying the spirit of wine lotion, let your cloths be thin, so that the spirit may combine with the heat of the part, and carry it off in the form of vapour; in other words, evapo-

ration is produced, and it is in that way its good effects are produced.

I do not recommend the application of ice to parts while in a state of inflammation; it irritates, and is apt to produce gangrene.

Some years since, when I was making a series of physiological experiments, I wished to ascertain what effects would be produced upon the pulse by the sudden application of severe cold, for which purpose I plunged my arm to the shoulder into snow; at the time of the immersion my pulse was 80, but immediately rose to 120; this result was contrary to all that I had ever been taught on the subject—the pulse sometimes did not rise so high as 120, not being more than 110, and was hard and wiry. The immersion in so great a degree of cold caused great pain, and consequently was a source of irritation. This experiment led me into an examination of the effects of the application of the cold bath; I found, that when a person in health took a cold bath, who was unaccustomed to do so, that it produced irritation; but on the contrary, when a person in a state of irritation, or febrile heat, went into a cold bath, it tranquillized the nervous action, and exerted a beneficial influence.

At one time, I had injured my health by being too much in the dissecting-room, and was in the habit of discharging from my stomach a good deal of blood; a considerable degree of sympathetic fever was the consequence; in this condition I went into the country, for the benefit of a pure atmosphere, and there had frequent opportunities of noticing the influence of cold upon an irritable pulse, in my own person.—Of an evening, when in the house, my pulse would be at 120, but upon going out into the cold air, it sunk in a very short time to 100, and by a long continuance in the cold, it became still less frequent. Thus, where there is great irritability of the nervous system, and where the heart is sending its blood through the different channels with accelerated motion, cold will prove invigorating, by destroying the first of these affections, and reducing the latter to the natural standard.

In a word, therefore, cold relieves inflammation when locally applied—by abstracting heat—by lessening the diameter of the blood vessels—and by diminishing the action of

the part, through lessening its nervous irritability.

The next mode of relieving inflammation, is by the application of heat and moisture: this looks like contradiction, but it is not so. It would be a contradiction to apply heat alone, and its application would certainly do harm; but the reverse is the result, when united with moisture; for the two produce relaxation, open the pores, give rise to perspiration, thereby removing congestion, and occasioning all the beneficial effects that would arise from the application of leeches. The sedative effects of heat and moisture are well exemplified by what happens when a person takes a warm bath; a man, for instance, with a pulse at 75, goes into water heated to 100 degrees, his pulse soon rises to 100, presently he perspires freely, his pulse becomes less frequent, yet soft; great relaxation follows, and, if he were not removed, he would absolutely die, so extensive is the exhaustion that it occasions. Here, then, is direct proof of what heat and moisture can do, when they are applied generally; and, when used locally, their action on the part is precisely the same.

Fomentations are ordered precisely with the same view, viz., to restore the secretions of the part, by which the tension of the vessels is removed, and the pain much abated. Fomentations occasionally are medicated, being composed of camomile flowers, poppy-heads, &c.; but I do not consider that these possess any advantage over mere water, at least where the surface of the skin is unbroken.

Poultices are likewise used upon the same principle; the kind of poultice is of little consequence, provided, as in the preceding case, the skin be entire.

The next method of relieving inflammation is by the application of leeches, which relieve upon the same principle as poultices and fomentations, viz., by abstracting from the part a portion of its fluids, and consequently lessening the pain and tension: after the leeches drop off, the bleeding must be encouraged; this may be done by bathing the part with warm water, and wiping the part frequently with a warm sponge.

To some persons, and in some situations, however, the application of leeches is attended with very great inconvenience; as occasionally, for example, in inflammation of

the testicles. We do not find this an inconvenience in the hospitals; but frequently, in private practice, we see persons in whom it is of the greatest consequence that a bleeding from these parts should be concealed. Now, as there is much mess, trouble, and consequent exposure from an application of leeches, what we do in such cases is this: we request the person to stand before us, and, with a lancet, puncture some of the small veins on the front of the scrotum; in this manner, and with a little warm water, you abstract any portion of blood you wish; and what is of very great consequence, you stop it when you please; for, by placing the patient in a recumbent posture, and by applying some cold water to the punctures, the blood will immediately cease to flow. In this way, then, you may take blood from the scrotum, when the testicles are inflamed, with very little trouble, and without any exposure.

The learned lecturer here said, at the same time putting his hand upon one of the recently amputated stumps lying upon the table, that he had a few more remarks to make, but these would be on another subject; viz.

The occasional Retraction of the Skin of a Stump, after Amputation.

A surgeon, at Worthing, took off a boy's arm, pretty near the shoulder-joint; the stump healed kindly, and all was thought to be doing well: some months after, however, he complained of pain, and the skin retracted to such an extent, that the bone projected through it at least an inch; in this state, he came to town, and upon examining the part near the arm-pit, I put my finger upon a small tumor; this occasioned the boy to jump as though he had been electrified; I then performed the operation of amputation at the shoulder-joint, and upon examination, it was found that the tumor which had been touched before the operation, and produced the electric shock, was a large ganglion of nerves, and it had given rise to the excessive irritability of the stump, and the retraction of the skin.

Previously to the above case, a boy was sent to me, with a stump similar to the one I have just described, but in the leg; the ends of the bones were cut off, and the boy left the hospital apparently well; but soon after the arm case from Worthing had been operated upon,

and the nature of the disease ascertained, this boy again returned, having his stump in a painful, irritable state, and the skin evidently retracted. Knowing now the cause of the mischief, I cut down upon, and took out the end of the posterior tibial nerve: the bad symptoms disappeared, and the lad recovered.

Going round the Hospital the other day, I met with another case resembling the above, but, in point of irritability, much worse. At the particular request of the woman, I amputated, (Sir ASTLEY here exhibited the part to the students)—the nerves appeared to be enlarged, and had formed a ganglion partially resting on the extremity of the bone; this had produced such a degree of irritation, that no part of the stump could be touched without exciting a kind of electric shock; in fact, the woman appeared like a sensitive plant.

How the nerves become longer than the bones in these cases does not admit of easy explanation.

(The amputated stumps were left upon the table at the conclusion of the lecture, when each student had an opportunity of examining those beautiful and peculiar specimens of disease.)

LECTURE VI.

JUST before the conclusion of the last Lecture, I described the advantages which are derived, in Inflammation, by the local abstraction of blood, and explained the manner in which those advantages are produced.

I shall now proceed to describe

The Treatment of Chronic Inflammation.

In the Acute, as has already been explained to you, our object is to diminish vascular action; but in the Chronic we endeavour to increase it. Thus, in long-continued discharges arising from relaxation, we employ stimulating lotions, for the purpose of restoring to the vessels their healthy power of contraction. Again, in sluggish, indolent ulcers, it is absolutely necessary to excite action; for which purpose we employ washes, either composed of calomel and lime water, or the hydr. oxymur. and lime water; the cupri sulphas is also an admirable remedy in these indolent sores. Gonorrhœa, as I have already shown to you, gives us an excellent illustration of the differ-

ence between acute inflammation and chronic, and the principles upon which your opposite treatment must be founded. At first, you diminish strength and action, and then stimulate, for the purpose of restoring them.

Whenever you apply stimulating lotions to indolent ulcers, you should always cover the parts with oiled silk, to prevent evaporation, by which cold would be produced, and the design with which it was applied frustrated. Your object here is to obtain heat and action; as oiled silk obstructs evaporation, it very materially contributes to create these; and, as the perspiration as well as the vapour from lotions condenses upon the inner surface of the oiled silk, it of course succeeds in keeping the part moist; and this is a very great advantage, as it enables you to remove your applications without disturbing the new skin. Now, where this covering is not used, the linen over the wound becomes dry, adheres to the newly-formed skin, and consequently, when you take away one, the other must come with it: in this manner the restorative efforts of Nature for twenty-four hours will often be defeated in a single minute.

The next method of treatment which we shall mention, is that of

Counter Irritation.

The power of this remedy is very great, and its advantages numerous; but the chief benefit that results from its employment arises from its drawing off the blood from the neighbouring inflamed parts, whereby it checks the course of disease in important organs: thus, a blister at the nape of the neck, if early applied, will arrest an inflammation of the brain; a blister at the pit of the stomach will frequently overcome an inflammation of that viscus; a stimulating irritating lotion applied to the scrotum will often cure an inflammation of the testicle. But counter-irritation, carried to excess, will do harm; you must, therefore, be particularly cautious as to the manner in which you use it. In parts that have no immediate connexion, it is really astonishing to observe its effects. In inflammation of the lungs, a blister applied upon the chest (parts between which there is no direct communication) will soon stop the disease, and be to the patient the principal cause of recovery. Blisters, likewise, applied to the front of the body, as on the

abdomen, are extremely useful for the removal of inflammations of the liver, intestines, &c.

Blisters are more generally used by surgeons for exciting counter-irritation, than any other applications. Issues and setons are also occasionally adopted. I again caution you against exciting such a degree of irritation as would affect the whole system; if you were to allow this to happen, you would aggravate the original disease; it must therefore be limited, and kept within proper bounds. Sometimes, after the blister has been removed, it may be deemed prudent to keep the wound open; this you can accomplish by removing the loose cuticle, and by dressing the sore with savine ointment.

Another mode of producing counter-irritation is by the application of tartarized antimony made into an ointment. This is a very excellent method, and is now very generally adopted. You must be careful, however, on what surfaces you apply it, if you intend to excite irritation in a great degree; as it is apt, permanently, to disfigure the skin. I saw a young lady who had used it on the arm for a chronic inflammation of the elbow joint. She was offended with her medical attendants for having recommended its employment, as it left a scar near the elbow, which has since obliged her to wear long sleeves. Such a defect you would not like to see in your sister or friend; therefore, it is nothing more than right that you should endeavour to obviate its occurrence; and this you may always do by proper attention.

The next circumstance to be attended to in the treatment of inflammation, is position. Medical men do not consider the human body as an hydraulic machine; nor indeed is it so; but still the fluids of the body are, in some measure, governed by the laws of gravity. Look at the operation that I spoke of in the last Lecture, for relieving inflammation of the testicle. If you puncture the veins in front of the scrotum, and if the patient be in the erect position, blood will freely flow; but, put him in a recumbent position, the stream will immediately cease; though when the body is thus placed, the power of the heart is greater than when in the erect position.

If, during the ensuing winter, I should be called to any of you having inflammation in the hand, arising from punc-

tures inflicted while dissecting, I should immediately direct you to get an inclined plane made, upon which I should order you to rest your hand as long as the inflammation was at all violent.

It is equally necessary to attend to position in inflammation of the leg. I must give you an example; I was sent for, to see a gentleman farmer in the neighbourhood of Rayleigh, in Essex, who for a long time had been subject to a very severe inflammation in both his legs; they were exceedingly red and very much swollen, in a state threatening gangrene; the constitutional irritation was very great, and the tongue covered with a brown fur. I found him with his legs in a tub of water; I took out one of them, and it smoked excessively; I saw there was no time to be lost, had him immediately placed upon a sofa, and contrived to rest his legs upon the end of the sofa; consequently they were raised considerably higher than his body; the vessels soon began to unload themselves, and the skin, in a short time, was evidently less red than when taken out of the water. I then applied flannels wrung out of warm water; these soon produced a very considerable perspiration, by which the cellular membrane became unloaded, the swelling much less, and the pain materially abated. He gradually recovered, and in six weeks was enabled to ride a considerable distance to market.

The completest tyro in surgery ought to know, that it would be folly to attempt to cure extensive inflammation in a limb, if it were allowed to continue in a depending position.

The next circumstance to be attended to in the treatment of inflammation is rest; the necessity of which must be well known to you, as all of you must have observed that exercise increases the action of the heart, and consequently must be injurious in inflammation. To obtain rest for an inflamed joint is one of our grand principles in the treatment, and no good can be done without it: it is curious to observe how Nature herself directs this; for where a joint is diseased, the muscles which act upon that joint have lost their power: thus, if a man has an inflammation of the wrist, and you put your hand into his and desire him to squeeze it, you find that he cannot do so, or that the attempt is exceedingly feeble. In inflammation of the joints

of the lower extremities, the muscles of the part in like manner lose their vigour.

Indurations frequently remain after inflammation has entirely ceased; these are to be got rid of by diminishing the circulation of the part, and producing absorption by the following methods:—

Pressure has the power of exciting the action of the absorbents in an extraordinary degree; and you may produce it either by the use of rollers or strapping.

Electricity, too, is attended with similar effects; it acts strongly on the absorbent system.

Mercury, likewise, does the same; and, speaking generally, more decidedly so than either of the other remedies I have mentioned.

When a man dies in our foul wards, for example, in a state of salivation, we find that the alveolar processes which contained the teeth, have been in a great measure absorbed.

Friction has of late years got into great repute, for the cure of indurated and stiffened joints, occasioned by inflammation; it was first recommended by the late Mr. Grosvenor of Oxford, a man of strong mind, and who possessed a great share of common sense. This remedy was his hobby; and, like all other hobbies, it occasionally carried its rider into the mire; for Mr. Grosvenor sometimes would recommend friction before the acute inflammation had terminated, consequently it was productive of mischief rather than benefit; in many instances, however, where judiciously employed, the most beneficial results have been obtained.

Case.

A gentleman in the neighbourhood of Nottingham, when shooting, received a severe injury to his knee; after the violence of the first inflammatory symptoms had terminated, there remained considerable swelling, stiffness, and induration; for these he was attended by Mr. Attenborough, an eminent surgeon of Nottingham; as the gentleman did not get better, Mr. A. sent him to town, and here he for some time continued under my care and that of a physician; still the joint remained in the same state, and the means used were inadequate to afford relief. I advised him to go to Oxford, and consult Mr. Grosvenor. This he did; and as soon as Mr. G. saw him, and heard that his limb had been kept quiet, he told him to walk to

the bottom of Christ Church meadow, and then return and dine, which he really did. Friction was used in this case with the greatest success, for, within six weeks after he went to Oxford, he called upon me in town, quite recovered, and thanked me for recommending him to Mr. Grosvenor.

Friction accelerates circulation and absorption; and the way in which Mr. Grosvenor recommended it to be done was, by applying both hands to the joints, at the same time alternately moving them up and down.

The late Mr. Hey, of Leeds, a man whose mind was free from every paltry prejudice, most eminent in his profession, and ever anxious for truth, had a son who met with a serious injury to his ancle-joint; after trying all that he could to relieve it, he sent him to Mr. Grosvenor; and, under his care, by the judicious application of friction, the actions of the joint were completely restored.

On the Adhesive Inflammation.

For a knowledge of this, we are indebted to that bright luminary of our profession, the late Mr. John Hunter, a man who was abused, reviled, and laughed at, when living, by the very persons who, now that they cannot any longer injure him, are ever loading his name with every species of commendation and praise.

Adhesive inflammation is the process by which divided parts become united.

Inflammation has a disposition to separate the blood into more parts than usually occur when drawn from a person in health. In health, it merely separates into serum and red particles; but, when in a state of inflammation, if, after being drawn, it be allowed to remain undisturbed, it will separate into serum, red particles, and fibrin. The red particles, together with some fibrin, will be found at the bottom of the vessel; the fibrin immediately on the top of the red particles, forming what is called the buff of the blood; and the serum will occupy the surrounding space. The fibrin, having lost the red particles, contracts with great firmness, and when taken out almost resembles a piece of leather. It has been said, that the adhesive matter is albumen; but it has been proved not to be so. Doctor Bostock, who was for several years at Guy's Hospital, took great pains to investigate its nature, and published several

papers on the subject in the Medico-Chirurgical Transactions: he named it fibrin. Mr. Hunter called it coagulable lymph; this certainly was not a good term to be applied to such a substance, for lymph is expressive of, and relates to, water; whereas fibrin is not only a solid, but an exceedingly firm one.

Some surfaces of the body are serous, while others are mucous. The cellular membrane is one of the former, and usually exhales a fluid somewhat resembling serum, but containing much less albumen. This membrane is very liable to the adhesive inflammation. The vessels that usually secrete the fluid just mentioned, when the part is inflamed, pour out fibrin, which, becoming coagulated, produces the hardness which we usually find in inflamed parts.

The peritoneum, a membrane which doubly encloses the intestines, is a serous surface, often affected by the adhesive inflammation; which occasions the two surfaces of this membrane to be firmly glued together.

But the part of all others the most subject to this kind of inflammation, is the pleura, and we scarcely ever open a body without finding upon its surface many unnatural adhesions.

The heart, in like manner, is often glued to the pericardium, so that the space usually found between the two portions of membrane is oblite rated.

The three membranes of the brain frequently appear as one, so firmly and intimately will the adhesive inflammation unite them.

Thus, then, it will be seen that the serous membranes readily take on the adhesive inflammation, by which they become permanently attached to each other, or to the adjacent parts; this is a most beautiful and wise provision of nature, for if the membranes of cavities, such as the pleura and peritoneum, instead of the adhesive, were to receive and support the suppurative inflammation, effusion and death would be the inevitable consequences.

The mucous membranes, as the urethra for example, are affected by the suppurative inflammation. This is another of Nature's benevolent and wise ordinances; for had they been subject to the adhesive, the outlets of our bodies would have become closed, and life destroyed. Sometimes, where inflammation of a mucous mem-

brane is exceedingly violent, it passes into the adhesive inflammation, glues the parts together, and, unless relieved by an operation, would end in the destruction of life. I can relate to you an example of this: there was brought to me from Exeter 'Change, a kangaroo for dissection. His bed of straw had caught fire, but it was very soon extinguished; and the proprietor, knowing that he had not been severely burned, was at a loss to account for his death. Upon examination, his bladder was filled with urine, which was retained in consequence of the closure of the urethra by the adhesive inflammation; the penis having been severely injured by the fire, the inflammation which followed was violent, and passed at once into the adhesive form. Thus you may perceive that common gonorrhœa would destroy life, if it were not so arranged by Nature that mucous membranes are more readily influenced by the suppurative than by adhesive inflammation.

On the Effects of Stricture of the Urethra, particularly of the sacculated State of the Bladder, with an Inquiry into a Mode of Treatment to avert this latter consequence of Stricture, which is often fatal. By JOHN SHAW, Esq.—*Read Feb.* 25, 1823.

[From the Medico-Chirurgical Transactions.]

(Concluded from p. 61.*)*

WHILE upon this subject, I should not omit to allude to certain cases, which, though not uncommon, have scarcely been described by any author: I mean the fistulous communication between the rectum and bladder, which is sometimes the consequence of the formation of a sac in the bladder, but more usually of a sacculated state of the prostate. It is almost needless now to say, that both of these have generally their origin in stricture of the urethra; but the important fact must not be overlooked, that the prostate itself is very liable to become sacculated, even though there be no stricture. The miserable condition of a patient with such a disease, and the little hopes we can hold out of doing more than alleviating his suffering, after the fistula is established, are too well known; but it is this circumstance, in addition to what has been already stated, and the hope of exciting others to engage in the investigation, that induces me to inquire whether we cannot avert these most fatal effects of stricture.

In doing so, the Society will

perhaps permit me to make some observations on the condition of those who are labouring under such strictures as are likely to produce some of the consequences just stated.

I shall suppose a case which is common, and must be familiar to many members of the Society.

A patient has had a stricture near the bulb for several years; every plan of treatment, as by bougies, caustic, and forcing, has been tried, but with so little success, that now the smallest bougie cannot pass the stricture. The patient has frequent attacks of inflammation of the bladder, and the water dribbles from him, or is passed only drop by drop.

When a patient is in such a condition, what have we to hope for, and what are we to dread, if something decided be not done to free the stricture, and at the same time to relieve the bladder from the constant irritation under which it suffers?

As it is presumed that all the common means for the relief of stricture have had a fair trial, we can scarcely expect now to remove the obstruction by such treatment. We can, therefore, only hope, that by palliatives we may allay the irritation; or if this cannot be effected, that, as the least evil, a suppuration may gradually form in the perineum, and produce a fistulous opening, which by allowing exit for the urine, may be the means of prolonging the patient's life.

This, then, bad as it is, is the most favourable issue which we can expect such a case to have, if left to nature.

It is, therefore, incumbent upon us to inquire what we have to dread, and what means ought to be resorted to for the relief and safety of the patient.

Since the bladder is in a constant state of irritation, it is very probable that, if the patient should catch cold, or dissipate in the slightest degree, there will be complete retention of urine.

If this should happen, what must be the consequence? The state of the stricture is such, that neither a catheter nor a bougie can be passed; therefore, if the patient be not immediately relieved, and this with great care, by cutting into the perineum, or by puncturing the bladder, he must either die of the irritation caused by the distended bladder, or the urethra will burst behind the stricture, and the urine, necessarily in a highly acrid state, be effused into the scrotum. If this last should be the result

(which it too commonly is in such cases), and if the patient be not then treated with skill and decision, he will probably die in the course of three days; or should he escape the immediate danger, he will run much hazard of sinking under the extensive sloughing of the scrotum and penis, which almost invariably follows rupture of the urethra, when a free passage for the evacuation of the effused urine has not been made.

The cases that occur almost weekly in London, and the histories which are contained in the catalogue of the preparations of stricture in the Museum of Great Windmill-street, will prove that this is not an overcharged picture, but that it is a fair statement of a very common case *.

But if complete retention of urine and the consequences just mentioned do not ensue, what must we fear from the bladder being kept in a constant state of irritation! If the patient is not suddenly carried off by the fever consequent upon the irritation, the probability is, that either the prostate gland will become disorganised and sacculated, or that sacs will form in the bladder, and in consequence of this, as has been already attempted to be shewn, a patient may gradually sink, worn out, without any distinct symptoms.

Under such circumstances, are we not entitled to say that something decided should be done, with a view to remove the stricture and relieve the bladder?

With this object, should a catheter be attempted to be forced through the stricture, or should the bladder be punctured? The proposal of forcing the stricture is decidedly wrong, because the portion of the urethra which is contracted is probably much firmer and stronger than any other part of the canal, and is, perhaps, of the same cartilaginous nature as in several of the preparations on the table, in some of which the stricture is so hard that it was necessary to use the knife in the manner of a saw, before it could be divided *.

* See the numerous and important examples which are detailed in the third edition of the Treatise on the Diseases of the Urethra, by Charles Bell.

* The strictures on the table are good examples in proof of the little value of the late proposals to cure such diseases by complicated machines called dilators. We may be pleased with the ingenuity displayed in the mechanism of these instruments, the invention of which is claimed both by English and French; but when we look upon them as instruments, in-

Puncturing the bladder would be infinitely safer than the attempt to force the stricture, but it would not be effectual, as it would only afford a temporary relief. Seeing the many dangers to which a patient, in such a condition, is liable, and having, by experience, found that, when the urgent symptoms (which we must expect) do come on, prompt measures must be used, or our patient will be lost; are we not entitled to inculcate the propriety of performing an operation while the parts are yet comparatively in a favourable state? The proposal is the more encouraging, as the operation, if dexterously performed, is not severe, nor attended with any danger, and it is moreover one which will probably not only afford immediate relief to the bladder, but also, if not the means of restoring the patient to perfect health, put him into a condition of much greater ease and comfort than could be expected if his disease were to terminate in what we should consider its most favourable natural issue.

The operation is not severe; indeed much less than what almost any patient will cheerfully submit to, in the mere hope of being relieved from the inconvenience of a fistula or perineo. It is merely to cut through the stricture, to introduce a catheter from the glans, and endeavour to make the urethra entire, by allowing the wound to granulate over the catheter*.

Some may, perhaps, consider that such a serious operation is not warranted for the relief of a trifling disease; but I hold that the question involves the life or death of the patient, and whether, with the knowledge that this same *trifling disease* is daily fatal in London, we are to allow our patient to be in-

tended to cure stricture, we can only be amused, for it is quite impossible to introduce even the point of the smallest of them into such a stricture as should be considered difficult to manage. The circumstance of the possibility of passing a dilator through a stricture, so as to be used in the manner described by the inventors, should be sufficient proof that the stricture is so slight, that it might be easily cured by the common methods. In several of the examples on the table, the narrowing of the canal is to such a degree, that it is not possible to pass more than an eye-probe or hog's-bristle through the stricture.

* I should here state distinctly, that the question of the manner of operating is quite changed when there is an immediate necessity for relieving a patient suffering from distended bladder. Upon this I shall not enter, as the question is fully discussed in the work on the Diseases of the Urethra, to which I have already referred. My object at present is to inculcate the necessity of a patient submitting to an operation, although he may not at the moment be in immediate danger.

sidiously brought into a state in which we can afford no relief. Why should we not reason with him as we would had he a malignant tumour or aneurism? As to the difficulty of the operation, I can confidently assert there is none; but, on the contrary, that it may be very easily performed. Experience has shown that it is so, and the circumstance of the urethra being almost invariably dilated behind the stricture, proves that, when the stricture is divided, the principal object of the operation is attained.

The only difficulty likely to occur in the first stage of such an operation is, that in introducing the catheter with the intention of passing it down to the stricture, as a mark for our incision into the urethra, it may enter into one of the false passages that have been previously made in the ineffectual attempts to force the stricture*.

In the second stage of the operation, we may have some difficulty in discovering the opening of the urethra after the stricture is cut through, for there may be false passages continued even beyond the point of stricture, or the urethra, by its elasticity, may be so close that we cannot see it; these difficulties have occurred in one or two cases, but are more easily surmounted by observing the point from which the urine issued. To have the advantage of the passage of the urine to direct us to the proper opening, we ought to enjoin the patient to retain his water for some time previous to the operation; but if (which is very probable) he is not able to do so, and if there be, after cutting through the stricture, much difficulty of carrying the catheter into the bladder, we ought to desist from all attempts, until the bladder is again filled, for then, with a little care, we may easily discover the proper opening, and pass the catheter into it.

I should also state, that in one case, where the stricture

* There is on the table a preparation in example of the occurrence of this accident. The operation in this case was performed under great disadvantages, and after the patient had been saved from immediate danger, by puncturing the bladder. The stricture was found so firm, and so much mischief had been committed on the urethra, in the previous attempts to force instruments into the bladder, that cutting the stricture was considered to be the only means of restoring the canal; but the wound in the perineum was attacked with erysipelas, under which the patient, weakened by his great sufferings previous to the operation, sunk. This is the only example in which I have known the death of the patient follow the operation, and here the cause of death was probably the previous irritation.

was very long and hard, a small canula was introduced into the bladder, and kept there for four days; at the end of this time, the opening was so much enlarged, that the catheter was easily passed, the only difficulty being to carry it through the granulations, which, in the interval, had risen luxuriantly from the sides of the wound. It is scarcely necessary to add, that after the wound has closed over the catheter, the urethra must, for a considerable time, be kept free by the use of the bougie.

If the operation should so far fail that the wound of the urethra does not readily close, in what condition would a patient be placed, who, it is presumed, was in a state of great danger previous to the operation? It has been already alleged, that the most happy accident that could befal him would be the formation of a fistula. Now, though this would be the worst effect that could ensue from the operation, still it would differ from the spontaneous fistula in several important respects.

The stricture would be removed, which is the first step towards the cure of fistula, and there would be only a single and simple wound in place of the multitude of callous sinuses which take place in spontaneous fistula.

May I, in conclusion, be permitted to say, that since patients have not only been rescued from imminent danger, but restored to a better condition than what they had been previously in for years, by a simple and safe operation, we should be encouraged to perform it more frequently, and before the parts about the stricture become completely disorganised*.

In support of this view, the papers of several distinguished members of this Society might be adduced as illustrative of the great difficulty of performing such an operation, when the parts behind and surrounding the stricture have become callous and diseased by repeated attacks of inflammation.

LIZARS' PLATES.

We purchased, the other day, at Highley's, Parts I. and II.

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* Since this paper was read before the Society, I have seen a patient upon whom the operation described above had been performed. His appearance was so altered that I hardly recognised him. Previous to the performance of the operation he was so reduced by constant irritation, that he appeared like a broken down man of sixty; but now he is a hale and strong-looking man.

of a new system of Anatomical Plates by Lizars. Each number is accompanied by a lucid and well-written description, together with many appropriate physiological and pathological observations.

These plates are by far the best of the kind that we have ever seen. They are elaborately correct, both in outline and detail, and at the same time are beautiful specimens of the elegant art of engraving.

To those surgeons who are at a distance from the dissecting room, they must prove invaluable; and the exceedingly cheap rate at which they are published entitles the proprietors to the sincere thanks of the profession.

SIR ASTLEY COOPER'S EXPERIMENTS ON DIGESTION.

We are enabled to offer the following statement of a series of experiments performed upon dogs by Sir A. Cooper. They were instituted with a view to ascertain the comparative solvent power of the gastric juice upon different articles of food, and to derive any useful conclusions which they might afford, for the dietetic management of the human stomach, when in a weak state of digestive power. These experiments were related in the lectures which Sir A. Cooper delivered at the Royal College of Surgeons.

In the conducting of these experiments, every practicable uniformity of method was observed. The substances were cut to a determinate form, and weighed. They were then forced into the animal's throat. A given time having elapsed, the dog was killed; and the substances not yet dissolved by the action of the gastric juice, being again weighed, their loss, and consequently their degree of *digestibility* as food, under the healthy action of the stomach of the dog, approaching nearly in structure to the stomach of the human subject, was estimated. Raw food, and the lean parts only of meat, were given, except when the contrary is expressed.

EXPERIMENT I.

Kind of food.	Form.	Quantity.	Animal killed.	Loss by digestion.
Pork	long and narrow	100 parts	1 hour	10
Mutton	. . . . .	. . . . .	. . . .	9
Veal	. . . . .	. . . . .	. . . .	4
Beef	. . . . .	. . . . .	. . . .	0

EXPERIMENT II.

Kind of food.	Form.	Quantity.	Animal killed.	Loss by digestion.
Mutton	long and narrow	100 parts	2 hours	46
Beef	. . . . .	. . . . .	. . . .	34
Veal	. . . . .	. . . . .	. . . .	31
Pork	. . . . .	. . . . .	. . . .	20

EXPERIMENT III.

Pork	long and narrow	100 parts	3 hours	98
Mutton	. . . . .	. . . . .	. . . .	87
Beef	. . . . .	. . . . .	. . . .	37
Veal	. . . . .	. . . . .	. . . .	46

EXPERIMENT IV.

Pork	long and narrow	100 parts	4 hours	100
Mutton	. . . . .	. . . . .	. . . .	94
Beef	. . . . .	. . . . .	. . . .	75
Veal	. . . . .	. . . . .	. . . .	69

It is probable that the digestion of the dog, with regard to pork, differs from that of the human subject; as, when the human stomach is at all weakened, the order of digestion in these meats appears to be,

1 Mutton
2 Beef
3 Veal
4 Pork

Something also may be attributed to the absence of *fat* in the above experiments; and more especially the fat of pork.

EXPERIMENT V.

Kind of food.	Form.	Quantity.	Animal killed.	Loss by digestion.
Cheese	square	100 parts	2 hours	76
Mutton	. . . . .	. . . . .	. . . .	65
Pork	. . . . .	. . . . .	. . . .	86
Veal	. . . . .	. . . . .	. . . .	15
Beef	. . . . .	. . . . .	. . . .	11

EXPERIMENT VI.

Beef	long and narrow	100 parts	2 hours	0
Rabbit	. . . . .	. . . . .	. . . .	0
Cod fish	. . . . .	. . . . .	. . . .	74

Hence it appears that fish is easily digested.

EXPERIMENT VII.

Kind of food.	Form.	Quantity.	Loss by digestion.
Cheese	long and narrow	100 parts	29
Fat	. . . . .	. . . . .	70

EXPERIMENT VIII.

To the same dog, beef and a portion of raw potatoe were given, of each, one hundred parts.

	Loss by digestion.
Beef	100
Potatoe	43

The skin in contact with the potatoe was not acted upon. Under the skin the potatoe was dissolved, but the gastric juice had not reached its centre. Where the skin was separated, it was dissolved.

In the dog, according to the following experiments, roast veal is more difficult of digestion than boiled.

EXPERIMENT IX.

Kind of food.	Form.	Quantity	Animal killed.	Loss by digestion.
Roast Veal	long and narrow	100 parts	. . . .	7
Boiled ditto	. . . . .	. . . . .	. . . .	30

EXPERIMENT X.

Roast Veal	long and narrow	100 parts	. . . .	2
Boiled ditto	. . . . .	. . . . .	. . . .	31

The following materials were next the subject of trial.

EXPERIMENT XI.

Material.	Quantity.	Animal killed.	Loss by digestion.
Muscle	100 parts	4 hours	36
Skin	. . . . .	. . . .	22
Cartilage	. . . . .	. . . .	21
Tendon	. . . . .	. . . .	6
Bone	. . . . .	. . . .	5
Fat	. . . . .	. . . .	100

The appearances produced were these:—In the muscle, a separation of the fibres by gradual solution of the connecting media first took place; and afterwards, the fibres themselves became broken down into very minute portions

The skin, upon its under surface, was broken down; but upon its upper surface was not altered.

The cartilage was apparently worm-eaten.

The tendon was reduced to a pulpy gelatinous substance.

Further Experiment on the digestion of bone.

EXPERIMENT XII.

		Animal killed.	Loss by digestion.
Thigh bone	100 parts	8 hours	8
Ditto	. . . . .	6½ hours	30
Scapula	. . . . .	6 hours	100

In the human subject, the stomach is capable of acting upon bone; of which fact, the following case is an example:—

On Monday, the 28th of March, a little girl, nearly four years of age, accidentally swallowed a *domino*, which passed the bowels in rather more than three days. The medical attendant (Mr. Maiden, of Stratford), observing that it was much smaller in size than the other dominos of which it had been one in the set, was induced to weigh it, and found that its weight was only 34 gr. while that of the others was 56 gr.; so that it lost by digestion 22 gr. Those surfaces of the domino which, when swallowed, were hollow and blackened as usual, were found prominent like buttons.

VENTILATION.

The following, taken from the History of the Dublin Lying-in Hospital, shows in an extraordinary degree the advantages that result from free ventilation. We consider this a document of great value, and hope that it will convince all parents of the folly, not to say cruelty, of confining young infants in rooms with closed doors and windows.

Dublin Lying-in Hospital—In this hospital 2,944 infants out of 7,650 died in the years 1782, 1783, 1784, and 1785, within the first fortnight after their birth, that is, nearly *one child* out of every *six*. They almost all died in convulsions, of what the nurses called *nine-days fits*, because they came on within nine days after their birth. These children, many of them, foamed at their mouths, their thumbs were drawn into the palms of their hands, the jaws were locked, the face was swelled and looked *blue*, as *though they were choked*.

This last circumstance led the physicians to conclude that the rooms in the hospital were too *close* and *crowded*, and hence that the infants had not a sufficient quantity of *good air* to breathe. They contrived, therefore, *air-pipes*, six inches wide, which were placed in the ceiling of each room. Three holes, an inch wide, were bored through each window frame; and a number of holes were made in the doors at the bottom.

Thus the rooms were kept *sweet* and *fresh*; and the *consequence* has been, from the register in that hospital, that,

	Children.	
In 1786, out of	1,372	there died 51
1787, ——	1,375	—— 59
1788, ——	1,496	—— 55
	4,243	165

So that since the alteration of the rooms as to airiness, out of 4,243 there died 165 children; whereas before, the average amount of deaths from the same number was 1,632*.

* If out of 4,243 children there perished *when the hospital was ventilated*, only 151 infants, how many may be expected to die out of 7,650, the number of children born in the DUBLIN *Lying-in Hospital* in the years 1782, 1783, 1784, and 1785? The answer is, by the rule of proportion, 279. But, how dreadful the account: there perished absolutely 4,243, deducting 279, solely *from the want of a due supply of air!* We have not only to deplore the number of innocent victims who were destroyed at this time and previous to it, but also to lament the wretched anguish of the disconsolate parents, and the impoverished state of health of many of the poor babes who survived this slaughter.

The great and good Dr. Hales, whose studies and experiments were constantly directed to the benefit of mankind, recommended a trial of *ventilators* in the Savoy and Newgate prisons, in both of which the *gaol fever* was frequent, and commonly fatal: the good effects exceeded even his most sanguine expectations; for a very small proportion of the sick died, when the ventilators came into use, and the contagion seemed in a manner arrested. The benevolent Mr. Howard found the prisons on the continent perfectly free from *this pestilential fever*; owing, as he thinks, to the apartments in which the prisoners were confined being spacious, and consequently well aired.

COMPOSITIONS OF QUACK MEDICINES.

Roche's Embrocation, for the Hooping Cough.—Olive oil, sixteen ounces; oil of amber, eight ounces, scented strong with oil of cloves.

Taylor's Remedy for Deafness.—Oil of almonds, one pound; bruised garlic, two ounces: alkanet root, half an ounce: infuse, and strain.

Whitehead's Essence of Mustard.—Oil of turpentine; camphor; spirits of rosemary; to which is added flour of mustard.

Rymer's Cordial Tincture.—

Capsicum; camphor; lesser cardamoms; rhubarb; aloes, and castor, in proof spirit, with a few drops of oil of vitriol.

Bateman's Pectoral Drops.—Sweet fennel seeds, two pounds eight ounces; aniseeds, one pound; proof spirit, four gallons; water, a sufficient quantity; distil ten gallons, to which add opium, seven ounces and four drachms; camphor, six ounces; prepared kali, one ounce; red coral, four ounces.

Freeman's Bathing Spirits.—Soft soap, six pounds; camphor, eight ounces; rectified spirits of wine; water, of each three gallons: colour with Daffy's elixir.

PENITENTIARY AT MILBANK.

Extract from the Report of the Select Committee of the House of Commons, appointed to inquire into the present State of the Penitentiary at Milbank.

Your Committee felt it their duty to inquire, not only into the cause of the disease so long prevalent, but also into the medical treatment of it, and more particularly so in consequence of a difference of opinion being held upon this important subject by the surgeons and physicians they called before them. They did not, however, do this from their entertaining the least suspicion of the talent, judgment, and skill of the medical officers of the establishment, Drs. Roget and Latham; but when a contrariety of opinion was held upon a subject in which the lives of hundreds of human beings might ultimately depend, who had no choice but to submit to the treatment which their medical advisers might prescribe, your Committee considered themselves imperiously called upon to refer the subject to the best medical authorities the country could produce; accordingly, a deputation from the College of Physicians visited the Penitentiary, and their Report (which is here subjoined) sets, in the opinion of your Committee, the question at rest, and fully confirms the propriety of the practice of Drs. Roget and Latham.

(Copy.)

"*Whitehall, June* 23, 1823.

"Sir,—In consequence of the illness which has long prevailed at the Penitentiary, and the difference of opinion which has been expressed by medical men of considerable eminence, with respect to the causes of this disorder, and the nature of the remedies which it is proper to apply, I am induced to request that you will bring the subject under the consideration

of the College of Physicians, and that you will have the goodness to move the appointment of a Committee for the purpose of visiting the Penitentiary, and of reporting to me their opinion upon the nature of the disorder which prevails in that establishment, and upon the probable efficacy of the present course of medical treatment.—I have, &c.

(Signed) "R. PEEL."

"Sir H. Halford, Bart. &c. &c. &c."

(Copy.)

"In compliance with the request of the Right Hon. Secretary of State for the Home Department, we, the undersigned members of a Committee appointed by the College of Physicians, have visited the Penitentiary at Milbank, examined the state of the patients there, heard the accounts given by the medical attendants, and do report upon the two questions submitted to our investigation, as follows:—

"From the testimony of the medical officers, compared with the details given uniformly by the patients themselves, of the former stages of the disease prevalent amongst them, that the disorder has borne a *dysenteric* character. But we have to observe, that the patients are now far advanced towards recovery, and that the severer symptoms which distinguish dysentery prevail no longer. Many, however, still continue ill of a milder complaint of the bowels.—Upon the second question we report, that the treatment by mercury, adopted in this disease, appears to have been very successful.

(Signed)

HENRY HALFORD,
President of the College
HENRY AINSLIE.
EDWARD ASH.
W. G. MATON.
THOMAS TURNER.
PELHAM WARREN."

College of Physicians,
June 27th, 1823."

On the 15th of May, the annexed list was given in by Dr. Roget, Physician to the establishment:—

Prisoners under Medical Treatment on the 15th of May.

		Men.	Women.	Total.
Diarrhœa	Ill	46	44	90
	Better	49	87	136
	Well	49	20	69
Other complaints		21	30	51
	Total	164	181	345

May 23, 1823.

Diarrhœa	Stationary	63	46	109
	Better	51	56	107
	Well	64	47	111
Other complaints		24	35	59
	Total	202	184	386

June 11, 1823.

Diarrhœa	Stationary	73	35	108
	Improving	86	38	124
	Well	82	88	170
Other complaints		24	28	52
	Total	265	189	454

Since this Report was drawn up, a return of the prisoners under medical treatment on the 3d July, 1823, has been given in to the Committee, by which it appears that the disease is rapidly on the decline, the sick who are considered as stationary, being reduced from 108 to 39.

Prisoners under Medical Treatment, 3d July, 1823.

	Men.	Women	Total.
Stationary	17	22	39
Convalescent	70	37	107
Well	179	83	262
Ill of other diseases	8	22	30
Total	274	164	438

The following are Extracts from the Evidence.

Dr. Roget *examined.*

Do you not think that the moral causes had a very great influence in creating the complaint, as well as the physical ones?—I think they had a considerable influence.

Will you state what those causes are, which are designated generally under the name of moral causes?—General depression of mind from the loss of liberty, and privations of different kinds consequent upon that loss—despondency generally.

Do you think that the long terms of imprisonment to which persons are sentenced, may be considered as one of the most leading of those moral causes?—I think so.

And of course operating in a stronger degree in this prison than any other, from the length of the terms being so much greater?—Certainly.

When you visited the Penitentiary, you of course saw Dr. Hutchinson, the principal medical officer?—Certainly.

Did the patients in the hospital appear to you to be properly attended to by him?—Yes.

Did his mode of treating the disease, namely, the disease of the scurvy, appear to you to be that which was the best fitted to cure it?—We had not an opportunity of seeing the treatment he adopted, previously to our being called in; and, indeed, there had been but little opportunity for the employment of any medical treatment.

In point of principle, was not your treatment nearly the same, or differing in a very trifling degree, with the treatment he adopted?—We adopted the same treatment, as far as the scurvy is concerned, that he had recommended.

In what was the difference in your practice, as to any other complaint?—The diarrhœa we did not treat in the same mode.

Was every information given to you by Dr. Hutchinson, which you thought fit to ask him, and every facility afforded to you by him?—Perfectly so.

Had you any conversation with him relative to the drooping state of convicts in the early part of the winter?—We undoubtedly conversed with him on all those subjects.

Did any of the Committee express to you any doubt as to

the medical treatment of Dr. Hutchinson, or any unfavourable opinion of his conduct as the medical officer of the establishment?—Not the smallest.

Do you think that the diet which the prisoners receive is not sufficient for a person confined only for six months?—It would appear so, from what we have seen of the Penitentiary.

Supposing it is found, in other prisons, to be quite sufficient for a period of six or twelve months, why should it not, in the Penitentiary, be also sufficient?—I am unable to explain the reason, but such is the fact.

You state that the diet is not sufficient for those who are employed in hard labour, and that that has been, in a great measure, the cause of the disease which prevails; how comes it, then, that the disease appears to have commenced, and to have been to a greater degree, among those that were not employed at all?—We found it difficult to account for that, unless by taking into account the effect of the greater cold to which they are exposed during the night in the sleeping-cells.

You know what the tread-mill is; do you consider that it is calculated to injure the individuals at all who are employed in that way?—Reasoning without experience, I should not think it would injure the prisoners.

(*To* Dr. P. M. Latham.)—Is that your opinion?—Certainly; and as far as medical opinion has been ascertained upon this subject, there is only the objection of one medical man to the employment of the tread-mill, and he says it is calculated to produce *hernia*.

Are you of that opinion?—I have not seen the tread-mill myself.

(*To* Dr. Roget.)—Are you acquainted with the gaol of Newgate?—I am not.

Or any other large prison in the metropolis?—No.

Are you of opinion, that if prisoners in any other prison of the metropolis, not near the river Thames—for example, in the prisons of the city of London or Cold Bath Fields—had been confined to the same diet as has been practised at the Penitentiary, and managed precisely in the same manner, they would have been liable to the same sort of complaints?—I think they would.

Do you happen to know whether there is any such complaint in the prison at Cold Bath Fields?—I do not.

Had you any previous experience of the disease called sea scurvy, before you went into the Penitentiary?—All the cases of scurvy I have seen have been single, and occasional cases of scurvy such as occur in the London hospitals.

(Dr. Roget.)—My experience is of the same kind; I have seen occasional cases, in workhouses and hospitals.

Sea scurvy:—(Dr. P. M. Latham.) It is found there is no distinction; that the disease known by the name of sea scurvy, is in fact amphibious.

(*To* Dr. Roget.)—Are you not in the habit of attending one of the dispensaries?—I am; I have been physician to the Northern Dispensary for the last thirteen years.

Whenever there is low diet and diminished food, is not that disease, whether on board ship or on shore, one of common occurrence?—(Dr. P. M. Latham.) I do not know that it is one of common occurrence on shore; it is considered that any causes which are calculated to depress, may possibly produce this disease among many others.

Do you know, as a medical fact, that in besieged towns it is a disease of common occurrence, where inhabitants are straitened for food?—Yes.

Alexander Copland Hutchinson, M.D., *examined*.

How long were you principal medical officer in the Penitentiary?—Very nearly seven years.

As you filled that situation at the period when this disease was at its height, will you inform the Committee what you should consider to have been its cause?—I should think insufficiency of nourishment, and want of proper air and exercise, the chief causes.

Was it not in July that the new dietary was established?—I believe it was in July.

Did you consider the old dietary as sufficient?—I thought, with the Committee of the Penitentiary, that it was rather too much.

What symptoms were there among the prisoners of its being too much?—A fulness of habit.

When the new dietary was established in July last, were you consulted, and your opinion taken upon the change?—Not in July.

When was it first taken?—On the 18th of March, 1822; I had been, however, consulted upon the subject of the change of dietary, by different Members of the Committee, for a year or two previous to their applying to me officially for my opinion, in regard to what reduction the then existing dietary could bear, with due regard to the health of the prisoners.

Altogether, what was the difference between your plan, in point of reduction of food, and the old dietary?—By the old scheme, the week's diet for a male and female together, consisted, in respect of animal food, of forty-eight ounces of boiled meat and thirteen pints of broth; and I know that such a quantity of food, having particular regard to the strength and quality of the broth, as it was then given, is the produce of seventy-six ounces of raw meat, weighed free of bone; whereas the weekly allowance of dietary proposed by me for a male and female together, was to consist, in respect of animal food, of sixteen ounces of boiled meat and twenty-one pints of broth, such broth to be of the very same strength and quality as that previously in use; and I know that this last quantity of

food would result from forty-eight ounces of raw meat, free of bone: the proportion, therefore, which the animal food in the old scheme bore to that in the dietary proposed by me, was as 76 to 48, which is nearly as three to two.

The old dietary had more of the animal fibre than yours?—Considerably.

Therefore the alteration in the quantum of the dietary was a reduction in the solid meat? | Yes, but with some increase of the liquid nutriment.

Is your opinion, that the want of air and exercise is, in part, the occasion of the prevailing sickness, founded upon the presumption that at one period any of the prisoners had only five minutes' exercise during the day?—I merely stated that the prisoners came to me and complained of their not having more than five minutes' walking exercise. This representation of mine was a day or two only after the prisoners had so reported it to me, and that was the time that I supposed inquiry would have taken place.

You have stated, that you believe the want of air and exercise to be one of the causes of this disease; do you now believe there ever was any period in which the prisoners had only five minutes' air and walking during the day?—I am not giving my own opinion, but having it upon the *ipse dixit* of the prisoners, that they were only allowed five minutes, it was my duty to report it.

You have stated, that you believe a part of the cause of the illness to be a want of air and exercise; on what belief of the quantity is that supposition founded?—It is because the prisoners have frequently complained to me that their legs and knees were sore and cramped, by sitting so long; and from looking over the instructions and rules of the institution, it appeared to me that they had not sufficient exercise; and I frequently mentioned to Mr. Holford, particularly when he remarked as to tailors, that they did the same in private life; I said no, for they had to run a considerable distance to dinner, they had the Sundays, and had to run about, sometimes from morning to night; all those circumstances have passed in conversation, and I have, on various occasions, continued to urge the necessity of greater exercise.

Dr. P. M. Latham,
examined.

What reason had you and Dr. Roget for adopting the use of oranges, instead of the use of lemons?—Dr. Roget and myself had no doubt whatever of the antiscorbutic efficacy of oranges; we considered the acid of oranges and the acid of lemons to be essentially the same. It rests upon the best authority that oranges will cure scurvy; I may particularly refer to a paper of Dr. Heberden's, a man of some authority, in the Medical Transactions of the College of Phy-

sicians, in which he relates several cases of aggravated scurvy in St. George's Hospital cured by oranges. For my own part, all the cases of scurvy I had seen, up to that time, had been cured by oranges, and not by lemons; considering then that oranges were as efficacious as lemons for the cure of scurvy, we gave the preference to oranges as a more suitable article of diet; we considered that, if a lemon was given to each prisoner, there was a chance that he would not eat the lemon, but if three oranges a day were given to each prisoner, it was certain that he would eat the oranges.

Do you happen to have heard whether this disorder has prevailed in Norwich gaol lately, and how it has been cured?—I happen to know, for a certainty, that it has prevailed in Norwich gaol, and has been cured by oranges.

Sir Gilbert Blane, Bart, M. D., *examined.*

What is the difference between the sea scurvy and the land scurvy?—What is commonly called land scurvy has not the least resemblance to sea scurvy. What is commonly called scurvy, in common language, is a cutaneous disease; it has not the least resemblance to sea scurvy: by some accident in the language, they have been called by the same name; land scurvy takes its name from scurf; sea scurvy gets its name from a Saxon word, meaning a sore mouth.

William M. Pitt, Esq., *examined.*

The Committee have seen, in a letter purporting to be written by you, dated "Dover Street, April 26, 1823," and addressed to Dr. Hutchinson, the following sentence:—"I have often lamented the jealousies and cabals amongst the officers, which, from an early period, have been too prevalent in the Penitentiary, and have led to a system of malicious tale-bearing, which I had always hoped would have been more discouraged." That letter is yours?—It is.

The Committee wish to ask you, upon what grounds you have made this statement?—I had long been of that opinion, and am as much convinced of it at this moment as ever. I am aware, that so strong an expression requires to be supported by facts, or by strong grounds of suspicion. It is very unpleasant to me to be reduced to the necessity of stating, as one of the grounds of that suspicion, communications that I have received from Mr. Holford. Mr. Holford and I, during all the time we have been together on the Penitentiary Committee, have been much in habits of communication; we have seldom disagreed on any points; but this is an exception. I have frequently received communications from Mr. Holford of information that he had received from prisoners, and from inferior officers and ser-

vants of the establishment, which have surprised me. I have always, or at least very frequently, taken the liberty of stating, that I thought information of that sort was highly objectionable, and, as I have stated upon other occasions, that it was very detrimental to the discipline of the establishment. I have certainly conceived that his being so ready to lend a willing ear to such communication, operated as an encouragement to tale-bearing; the consequences of which, certainly, have appeared to me to have been disputes, cabals, or intrigues.

In reference to what you have mentioned, cabals and jealousies among the officers, to what particular officers do you allude? do you allude to them all generally, or to any specifically?—I mean to say it had a general tendency to encourage insubordination, and cabals and intrigues amongst the officers.

Meaning, by that, between the governor and the turnkeys, the chaplain, the surgeon, the matron, and the steward?—I do not wish to apply it to any particular individual; but that a system of lending a ready ear to tales that are told by persons in those inferior situations, and especially from prisoners, was likely very much to diminish the respect those persons would pay to their superiors, and tended of course to insubordination from the inferior to the superior officers, and to diminish the respect with which the prisoners would hold their officers in general.

You continue the sentence as follows:—"With all the credit I am disposed to give to the visitors for purity of intention, and zeal in discharge of their duties, I must consider their not having effectually crushed such a system to have been detrimental to the discipline of the institution, and inevitably must be often injurious to deserving individuals:" is the latter part of the sentence, "inevitably must be often injurious to deserving individuals," a suppositious case, or can you state instances in which individuals have so suffered?—I have very little interfered or inquired into the particulars of those cases, and wish it to stand as rather a likely inference from such a practice.

When you mention the expression, "with all the credit I am disposed to give to the visitors," do you mean generally the visitors, or only Mr. Holford, as one of them?—Certainly, principally Mr. Holford, because I have had many more opportunities of knowing what he has done, as a visitor, than what any other gentleman has done.

LECTURE VII.

After recapitulating the principal points stated in the last lecture relative to Adhesive Inflammation, Sir Astley

said, I shall this evening consider,

The Appearances which parts assume unaer Adhesive Inflammation.

When an incision is made into a part affected with adhesive inflammation—into the cellular membrane, for instance—a quantity of serum is found effused round the part, and in the part itself a yellow and semitransparent substance, having the appearance of jelly, though widely different from it in its composition. The best opportunity that you can have of witnessing the adhesive inflammation, is on the skin under the irritation of a blister; the blister produces the same effects as those produced in the operation for hydrocele. Let a blister be applied for twenty-four hours, till the cuticle is raised; then make an incision into the vesicles, and a quantity of serum will escape. Here, perhaps, your observation may terminate; but examine the surface, and you will find on it a yellow substance, which will exist in a greater or less degree, according to the length of time the blister has been applied, on its severity, and on the irritability of the skin; but, generally speaking, under the application of a blister, adhesive matter is thrown out as under adhesive inflammation.

For those who are anxious to know the time required before the adhesive inflammation commences, it may be proper to state, that it is different according to the structure of the part, and nature of the constitution. In the cavity of the abdomen, the intestines will be glued together in nineteen hours after the adhesive inflammation has begun. Now I mention nineteen hours particularly, because I have seen it produced after that time in cases of gun-shot wounds. It may be in the recollection of some of you, that a Mr. Blight was shot by a man called Patch, in the neighbourhood of Deptford: the ball traversed the abdomen. I was called to this case, and Mr. Blight died in nineteen hours after he had received the injury. Here I had an opportunity of seeing what I have just mentioned; the intestines were glued to each other, and to the peritoneum; the peritoneal surface had quantities of adhesive matter on it, and was firmly united to the surrounding intestines. On the surfaces of wounds the process of adhesion takes place rapidly; for if a piece of lint be applied to a newly-made wound, in twelve hours it will be glued to its surface; in a

dog the adhesive process commences in six hours.

Adhesive matter, when effused on a thin membrane, coagulates into a net-work, assuming the character of cellular membrane.

When adhesive matter has been formed, blood-vessels soon enter it, and within a short time it becomes organized; the vasa vasorum are elongated by the force of the circulation; they enter the newly-formed substance, and send throughout it minute ramifications. On cutting into adhesive matter within twenty-four hours after it has been deposited, small bloody spots may be seen, which mark the future situation of the vessels which nourish it; but it is not till ten days after it has been formed that adhesive matter becomes completely organized; for you will find that a fine injection would not enter adhesive matter sooner than the tenth or eleventh day after its formation. When vessels elongate, they have not the character of arteries; in general they take a serpentine or tortuous course.

Some thought, at one time, and I believe Mr. Hunter was once of this opinion, that the vessels originated in the newly-formed substance; but they are formed by the elongation of the vasa vasorum of the surrounding arteries, which become dilated, lengthened, and serpentine: and the degree of vascularity will be in proportion to that of the part subjected to the adhesive inflammation. In tendons, for instance, it will be much less than in muscles.

This process is of the greatest possible consequence in surgery. It ought, therefore, to command much of your attention; and it will be unfortunate for you if you do not understand it. Without this process no operation could be attended with success: its absence, even after bleeding, would destroy life. Bear this principle in mind, then, gentlemen—always endeavour to effect union by adhesion.

Suppose you were called to a compound fracture, what would you do? Endeavour, certainly, by bringing the parts together, to make it a simple one. Within these few days you have had an opportunity of witnessing the fatal consequences of hemorrhage in a case of compound fracture; if the adhesive process had taken place, hemorrhage would have been prevented, constitutional irritation kept off, and recovery, in all probability, rendered sure. It is the same in formidable operations; the Cæsarean operation, which consists

in making an incision in the course of the linea alba, for the purpose of extracting a fœtus from the womb, is not dangerous, if the adhesive process take place; now and then, from hemorrhage and exhaustion, it proves serious; but, in most cases, the danger is slight, if union by adhesion be procured. To exemplify this by the operation for cataract: in this operation a wound is made in the eye—more than half of the cornea is cut; if the adhesive process take place within 12 hours, the flaps begin to adhere, and in 24 hours they are consolidated. Suppose, on the contrary, they do not—violent inflammation supervenes, and the result is destruction to the eye of the patient; the success of the operation depends then, in this instance, on the adhesive process. In a person who had been in ill health, the inflammation might be too weak, and in another case it might be too strong; suppuration would be the consequence in both instances; the same effect results in the two cases, though produced by very different causes. Again, in the operation for strangulated hernia, an opening is made into the hernial sac, which communicates with the cavity of the abdomen; and, if the parts are not afterwards united by the adhesive process, the patient dies. In the operation for aneurism, it is adhesive inflammation which saves life; a ligature is applied to the artery, a coagulum of blood forms, the adhesive process commences, fibrin is poured out, and the internal coats of the artery are glued together; but for this, when the ligature gave way, hemorrhage would ensue. In the operation for the radical cure of hydrocele, we have a beautiful opportunity of witnessing the effects of adhesive inflammation. After the water has been evacuated, a stimulating injection being thrown into the cavity excites upon its sides an irritation; inflammation is set up, adhesive matter thrown out, the internal surface of the cavity generally becomes permanently united, and thus a radical cure is effected.

The treatment of a stump after amputation will best illustrate this subject. In amputating a limb, your object is first to preserve sufficient integuments to cover the ends of the bone; it should be integuments, and not muscles, for if muscular fibres are preserved with the integuments, they will contract, and retraction of the skin covering the stump will be the result. When the limb

has been removed, you will apply ligatures to the bleeding vessels: now I would not advise you to tie every small vessel; ligatures on the principle vessels are quite sufficient, and the fewer applied the better, for though it is desirable to prevent disturbance of the limb afterwards, yet, by waiting a short time after the operation, the smaller arteries will generally stop.

The ligatures themselves should be small, and consist of fine silk, for nothing is so bad in operations as the application of coarse ligatures, excepting perhaps in cases where ossification of the arteries has taken place, when it would be justifiable: with this exception only, it is the worst possible surgery to apply thick ligatures to arteries; and if a surgeon were to do it, he would understand nothing of his profession; the thinner the ligatures are, then, the better.

Now there are two reasons why thin ligatures are preferable—1st. because they are less liable to escape; 2d. they divide the internal coats of the arteries more effectually: when you use a very fine ligature, the internal coats will be completely divided, and the external will remain entire. My friend Dr. Jones has published an excellent work on the natural means by which arteries unite in cases where ligatures are applied; and first he stated the fact of the internal coats of the artery being divided by the application of fine ligatures. Thick ligatures also prevent the wounds from healing so rapidly as thin ones. After the vessels have been secured, the sponge should be applied, and all coagula of blood removed, as this is very essential to the union of the part; blood is not the means but the prevention of union in such cases, for unless it be taken away, the adhesive inflammation will not go on. There is one instance in which blood favours the process of adhesion, and that is in the application of a ligature on an artery; with this exception only, the opinion of blood favouring the process of adhesion is to be banished from your minds, for there are but two modes by which union can be effected, viz. by adhesion, and by granulation; therefore remove all clots of blood, which will only act as extraneous bodies and keep up irritation. You are to cut off one end of the ligature close to the vessel, and let the other hang out of the wound: it has been recommended to cut off both ends of

the ligature close to the vessel; this plan has, however, been already given up. This was determined by Mr. Hunter, in the first operation he performed for aneurism on the trunk of the artery above the tumour, instead of on the aneurism itself; for in that instance he cut the ligature close to the knot, and copious suppuration afterwards took place. Ligatures can only be removed from the vessels by suppuration or absorption (in the latter case they must be first dissolved and then removed by the absorbents); and conceiving that if a ligature, composed of a substance easily soluble, were applied to a vessel, and cut close to the knot, it might be dissolved, and then absorbed, I applied a catgut one to the femoral artery of an old man whom I operated on for popliteal aneurism, and cut it close to the vessel; this case turned out well, for adhesion followed, and suppuration did not ensue. Although successful here, I have tried it in several cases since, and have failed in all, suppuration always coming on afterwards. I applied a silk ligature to the carotid of a dog on one side, and a catgut one to the carotid on the opposite side: upon killing the dog some days afterwards, I found the second ligature (catgut) buried in a cyst, and that the first advanced by the process of ulceration to the side of the larynx. Experiment and observation show, then, that it is better to cut one end of the ligature off, and to leave the other hanging from the mouth of the wound, to be removed when the ulcerative process is completed, which is from ten to fourteen days. Dr. Veitch, I believe, first advised the removal of half the ligature.

After amputation, having disposed your ligatures in a line with each other, and leaving them to hang out at the most depending part of the wound, you will, if the limb be removed above the elbow or knee, apply a bandage, to prevent retraction of the muscles and extensive suppuration. I have seldom succeeded with my stumps above the knee when I have not used a roller; it is better to apply a roller in such cases, for the muscles will then be glued together, and form one consolidated mass. Having applied a roller, and brought the integuments together, I merely put three strips of adhesive plaster over the wound, and one round the stump, to keep the ends of the plaster in their place. It is curious to see the difference

between the mode of dressing stumps now, and that adopted a few years ago; the old practice was, after the adhesive plaster had been applied, to put some lint, then plaster again, after that tow, and, lastly, over the whole, a cap of flannel. If a surgeon were to do this now, he would be laughed out of the operating theatre, and very deservedly too, because he would prevent the success of the adhesive process by unduly heating the limb.—All that it is necessary to do, is to apply three strips of adhesive plaster over the wound, and one circular piece; if the weather be hot, to apply the spirit of wine and water lotion, and if it be cool, to keep the limb quiet. The object is to keep down the inflammation to the adhesive stage; if it goes beyond this, suppuration will be the result.

The last circumstance necessary to mention, is the impropriety of dressing the stump too early; a person anxious to see whether union has taken place, removes the plasters from the wound in two or three days: he who does this entirely overlooks the object in view, and must be shocked, when he looks at the stump, to see that, by the early removal of the plasters, he has destroyed all that nature had done.—All you ought to do is, in four days after the operation, to remove one strip of plaster, for the purpose of letting out any matter which might have collected. In six or eight days after the operation, it will be proper to dress the stump; but to do it before would be absurd.

The treatment which is applicable to stumps, is proper also for common wounds.

The adhesive process is useful in the formation of cysts. Balls encysted have been known to remain in the body for many years. Morgagni, if I recollect aright, mentions a case where a ball lodged in a cyst in the lungs for a considerable space of time. If the ball be not encysted, it travels, and absorption of the parts through which it passes takes place. A few days ago, a gentleman called on me, who had formerly received a wound above the zygomatic arch from a ball; he now had a swelling on the side of his face. I asked him whether he thought it contained the ball; to which he replied, No: upon cutting on it, however, I found that it was the ball by which he had been wounded some years before. It had travelled beneath the zygoma to the middle of the

cheek, on the surface of the parotid gland, from whence I removed it. Perhaps it was assisted in its course by the action of the temporal muscle. I saw a boy, of Walworth, who had been attending a target at which some volunteers had been firing; he thought himself safe at a distance of thirteen yards; he was mistaken, however, for one of them shot him in the collar-bone. Some months after, he came to Guy's Hospital; and I removed the ball from about the middle of the upper arm. Thus the ball, by its weight and pressure, had occasioned suppuration and ulceration, which had enabled it to travel to the situation from whence I extracted it.

Another very important use of adhesive inflammation is that of its dividing cavities into distinct parts, by which means it fixes a boundary to the suppurative process; thus it will divide the cavity of the abdomen into two, by throwing out adhesive matter on the surface of the colon, by which it becomes glued to the peritoneum. In abscesses, a cyst is formed by the adhesive process round the matter, which prevents its escape into the surrounding cellular tissue.

The advantage of adhesive inflammation is admirably shown in wounds of the joints. Immediately on the knee-joint being opened, the synovia escapes, the person feels faint, looks pale, and the constitution appears to have received a severe shock. The wound endangers the loss of the limb and of the life of the patient, if bad treatment be adopted. If a poultice be applied to such a wound, or fomentations used, a suppurative inflammation will take place on the synovial surfaces; the cartilages become absorbed, and the bones ulcerated; a profuse discharge ensues, the constitution becomes extremely irritated; chills, succeeded by burning heat and profuse perspirations, frequently follow each other, and a person, just before in good health, is precipitated into a state of extreme debility. Sometimes the joint, after weeks, or even months, have elapsed, gradually heals by granulation, with its motion either entirely gone or greatly impeded.

If, on the contrary, the practitioner brings the edges of the wound immediately together, and attempts union by the first intention, the patient generally escapes from local or constitutional irritation. The edges of the wound should be

brought together by a fine suture—a plan, however, to which some surgeons object; but when the wound is direct into the joint, it affords an additional security to the patient, as the escape of the synovia has a constant tendency to prevent adhesion and to separate the plaster. The suture should penetrate the skin, the ligament being carefully avoided. A piece of lint wetted in the patient's blood is to be put over the wound, and over this strips of adhesive plaster. Linen cloths are to be laid over these, and be kept constantly wet with the liq. plumb. acet., and spirit. vini; a splint is to be placed behind the joint, to secure perfect rest.

In the operation for hare-lip, it is by the adhesive inflammation the wound becomes united, and the deformity removed.

The effusion of adhesive matter, by unloading the vessels of the part, has the effect of reducing the inflammation, so that the process generally terminates as soon as this effect is produced.

LECTURE VIII.

Suppuration.

SUPPURATION is the formation of purulent matter from the secreting orifices of the blood-vessels, which matter is named pus.

It is formed in cavities produced in the body by a process of absorption, as in abscesses; it is found also as a secreted fluid on the surfaces of membranes, or upon granulating surfaces.

The formation of matter is often attended with severe constitutional irritation; there are rigors succeeded by heat. When, therefore, you see a person who has had severe inflammation, and you wish to know if suppuration has taken place, you ask him if he has had a cold shivering; for this is generally the forerunner of the purulent secretion. If the inflammation be extensive, or seated in any vital organ, the constitutional disturbance will be very great, and the shivering, which indicates the formation of matter, will be very severe, and followed by a powerful re-action. Whilst the rigor continues, the blood collects about the larger vessels in the neighbourhood of the heart, and in the heart itself; at length this organ becomes stimulated to action, and sends the blood with considerable force to all parts of the body, but more particularly to that part where pus

is about to be secreted. A rigor, therefore, is merely a constitutional effort towards accomplishing the object that nature has in view. When pus is easily produced, as upon mucous surfaces, there is no rigor whatever.

When there is an attempt to produce matter, there is an unusual sensation of uneasiness in the part, together with a blush on the skin, easily recognised by those acquainted with the subject, as a sure indication that pus either has, or is about to be, formed. In the adhesive inflammation, the pain is an acute thrilling one; but here it is more dull, and is likewise pulsatory or throbbing. As this continues, the tumour becomes soft in the middle, but remains hard at the sides; the centre of the swelling points, as it is termed; and, upon pressing the part at this period, fluctuation will be evident.

The next thing to be observed, is an effusion of serum beneath the cuticle, which separates it from the cutis; it becomes gradually distended, and then bursts, leaving the cutis exposed. Ulceration sometimes takes place on the surface of the skin, whilst the same process is going on internally, so as to facilitate the discharge of the matter; generally speaking, however, the ulcerative process is continued entirely from within. These are the common appearances produced by the appearances of suppurative inflammation. Pus is generally formed in from seven to fourteen days; but the time required for this process will very much depend on the constitution of the patient, and the structure of the part in which the inflammation is seated.

Some parts more readily run into the adhesive, others into the suppurative inflammation; the pleura, pericardium, peritoneum, &c., are subject to the former; while the urethra, vagina, lachrymal duct, trachea, bronchia, nasal passages, &c., are liable to the latter: serous surfaces, therefore, are affected by the adhesive inflammation, and mucous surfaces by the suppurative. The reason why the inflammation affecting the two structures produces different results, appears to be this: the vessels of serous surfaces are too small to permit the transmission of the particles which pus contains; but when the inflammation becomes violent or long-continued, then the vessels dilate, and purulent matter is formed, even on serous surfaces. Some experi

ments have been made, which tend to prove that this theory is correct; for it has been found that injections which are sufficiently fine to pass freely into the vessels of mucous surfaces, will not penetrate in the slightest degree into the vessels of serous surfaces. I shall presently explain this to you more particularly.

In one of the preceding Lectures, it was mentioned, that dangerous consequences sometimes arose from passing bougies in very irritable habits; the danger in these cases depends upon the formation of the adhesive inflammation, instead of the suppurative. The duct or canal leading from the inner angle of the eye, and which conveys the tears into the nose, is mucous, and therefore, when inflamed, usually suppurates; consequently is only obstructed for a short period; and even this obstruction can be relieved at intervals, by pressing the finger upon the skin immediately under the corner of the eye, by the side of the nose, by which means the collected matter will be forced out at the puncta situated in the under eye-lid. Should the inflammation, however, be of the adhesive kind, then an obstruction will be formed that can only be relieved by an operation. This complaint is named fistula lachrymalis. The tears now pass over the cheek, and not into the nose, because adhesive matter has glued the sides of the tube together. The operation for the cure of this is simple, and will be explained to you hereafter.

The membrane covering the internal surface of the trachea is mucous, and, therefore, when inflamed, usually suppurates; but in croup large quantities of adhesive matter are thrown out, so as very frequently to occasion death. The coagulable matter adheres so firmly, that it cannot be disengaged by the ordinary efforts of expectoration; at last, from its increase, it fills the trachea, and suffocation is of course the result. Nature has, as we before remarked, wisely ordained, that the various outlets of the body should commonly be liable to the suppurative inflammation; and if this were not the case, life would be very much shortened indeed.

Arteries and veins, when inflamed, generally pass into the adhesive inflammation. It occasionally happens, however, that their inner coats suppurate; and I have more than once known persons die from the irritation thus excited.

Case.

A man in Guy's Hospital had a leg removed. In a day or two he became delirious, and shortly after died. When examined, no particular disease in his body was found; but the suppurative process had been set up in the arteries, and this caused the fatal catastrophe. Similar events would follow the operations for aneurism, if the adhesive inflammation did not supervene instead of the suppurative; for matter would form above the ligature, and, mixing with the blood, would destroy life. Suppurative inflammation of the veins has often been known to come on after bleeding, and occasion death. Upon dissection, in these cases, matter has been found in the heart, mixed with the blood.

Wounds made into joints are always dangerous: this has been said to arise from the admission of air. No name can be given to such a declaration but ignorant nonsense; for air has no power whatever of producing inflammation in these cavities, and he who says otherwise knows nothing about it: the synovial membrane lining joints is a mucous membrane, and, therefore, quickly passes into the suppurative inflammation, which circumstance renders an injury done to these parts exceedingly difficult to cure; besides the internal surfaces of joints are much more extensive than you would imagine: you would be astonished, if you saw the internal surface of the knee-joint spread out on this table; joints are also composed of materials having in themselves very little restorative power, being formed of ligament, cartilage, and bone, parts that soon inflame, suppurate, and become absorbed. Whenever, therefore, you are called to accidents of joints, and where openings have been made into them, these you should endeavour to close as speedily as possible. Likewise, when you have to remove from these cavities extraneous bodies, you should draw the skin forcibly on one side, and then cut through it down upon the substance. If the operation be performed in this manner, the skin being left to itself will return to its natural situation; consequently the cut in the integuments and that in the capsular ligament will not be opposite each other, and union by the first intention will be much more likely to ensue.

In the treatment of wounds of the theca as much caution is necessary as in those of the joints—their structure, in fact,

nearly resembles the capsular ligament and synovial membrane: an injury here causes, in a very short time, great pain and inflammation, much constitutional irritation and fever. If matter form, it becomes deposited, or locked up, as it were, in a tendinous bag; and so great is the irritation which it sometimes occasions, that it has been known to destroy life in 60 hours

Case.

A young gentleman from the West Indies, of great professional merit, of the name of Alcock, informed me one Monday night, after a surgical lecture, that he had, in the course of that day, punctured the thecæ in some part of his hand, —as he was living at the time in the house of the late Dr. Heighton, I advised him to show it to the Doctor (who was an exceedingly clever man;) he did so;—on the following day he suffered greatly from constitutional irritation, and on the Wednesday morning died: his system was certainly a very irritable one, and that accounts, in a great measure, for so speedy a dissolution. When, therefore, you suspect matter to have formed in these parts, let the quantity be ever so small, you ought to discharge it. It is surrounded by a structure through which, without assistance, it cannot pass; therefore Nature requires your assistance. At the commencement of inflammation in these injuries, your treatment should be prompt—apply leeches and lotions, and give your patient calomel and opium—these measures, judiciously used, will often check the progress of the disease, and in a short time completely remove it.

Formerly it was the opinion that matter was produced by a dissolution of the solids; but this opinion is now exploded, for we have numerous facts to prove that it is not true; in the urethra, for example, you all know that matter will be formed on its surface for months, and is the urethra destroyed by it? No, but, on the contrary, is thicker than it was before the discharge existed; and, upon examination of this part after death, no ulcers have been discovered, even if the matter had been flowing for months: the ancients thought that gonorrhœa arose from ulceration of the urethra; this opinion, therefore, is also found to be wrong. Again, in large cavities, such as the chest and abdomen, an immense quantity

of matter may be secreted, and yet, after death, no erosion of the solids will be discoverable; but the membranes lining their cavities, namely, the pleura and peritoneum, will be found very materially thickened. I remember, when there was a very warm discussion on this subject, the disputants used to put pieces of raw meat upon the surface of ulcers, and after suffering them to remain for some time, would then carefully weigh them for the purpose of ascertaining the quantity of substance lost.

Pus is not a fluid produced by the dissolution of the solids; it is secreted from the blood-vessels, but not until they have been acted upon by inflammation. The effects produced by the application of a blister exemplify this; when the cuticle is raised, first serum and fibrin are thrown out; remove the cuticle and apply upon the raw skin a piece of glass; at first no matter is to be seen, but in a few minutes you will observe it collect and adhere to the under side of the glass; bile, urine, and in fact, all the fluids, are secreted from the blood, but in each instance the action of the vessels is different.

Pus is composed of serum, and particles swimming in that serum; there may be, also, a little coagulable matter in the serum; this, however, is hypothesis; that fibrin is poured out from the vessels in adhesive inflammation is not hypothesis, but, on the contrary, a well-ascertained fact. The globules of pus are the same as the globules of the blood, but the action of the vessels appears to take away their colour; their form is the same, and size the same: these globules also resemble those that are containedin mucus.

Pus, when healthy, is a bland fluid, and will not irritate the parts that produce it. If poured into water, it sinks, because its specific gravity is greater than that of water. It appears to be composed of the constituent parts of the blood, slightly changed in their character, by inflammation. Healthy pus, I say, does not irritate parts; but surgeons formerly thought otherwise, and therefore used to cover the surfaces of wounds with sponge, for the purpose of sucking up the matter as fast as it was generated. When, however, pus is unhealthy, having mixed with it too large a portion of serum, or when bloody, then in passing over the skin it will irritate and occasion excoriation.

This matter does not appear prone to putrefaction in the healthy constitution, but in some persons it will, in a very short time, become inconceivably putrid and fetid.

Case.

A butcher, when getting out of a hay-loft, missed his footing, and in trying to save himself from a fall, had the misfortune to hitch his hand upon a hook, upon which the poor fellow hung like one of his own sheep. Eight days after the accident, he was brought to Guy's Hospital; the next day his hand was opened, and the matter discharged was most horribly offensive; on the following day he died. Whenever the matter of an abscess becomes offensive, you should regard it as a bad symptom;—such cases are troublesome, and often terminate fatally.

When matter of a poisonous kind, the result of a specific inflammation, is applied to the surface of the body, it irritates, occasions inflammation and suppuration, and this newly-formed matter is of exactly the same description as that which produced it; at least the poisonous quality is retained undiminished in virulence. This is illustrated by the discharge of gonorrhœa, chancre, small-pox, &c. To enumerate all the instances would fatigue you.

But these instances must be considered as additional arguments in favour of pus being a secretion.

Suppuration is not without its advantages: in two points of view it is very important.

1st. By forming a covering to granulating surfaces, thereby preventing the granulations from becoming dry through the influence of the air; for, if they were not kept moist, they could not push forward. 2dly. The suppurative process is the means resorted to by nature for effecting the escape of extraneous bodies: thus, a ball, by its pressure, gives rise to suppuration, and ultimately is discharged, excepting in such cases as we have before described, where it remains encased by adhesive matter.

Some wounds are very troublesome, and, do what we will, we cannot get them to heal. Now and then it happens, if you discontinue your dressings to such sores, and let their surfaces remain exposed to the air, incrustations or scabs will form: under these pus will be secreted, which, by keeping the granulations constantly moist, will often cause ulcers of this description to heal, when all

artificial attempts have been completely unsuccessful.

When the constitution has been long accustomed to a discharge from an ulcer, some caution is requisite when healing it; for, if done too suddenly, hectic or apoplectic symptoms are very apt to supervene. Ancient surgeons observed these; to obviate which. they were in the habit of making issues in other parts of the body at the time of healing old sores. Quantities of matter, constantly discharging for a considerable period, inevitably act on the constitution as sources of depletion; and which, if suddenly discontinued, we may reasonably imagine would produce the symptoms before stated. There is no necessity, however, for issues to prevent them, as purgative medicines will answer much better, and speedily carry from the system, by a natural channel, any increase of its fluids. Mr. Wilson, formerly a Lecturer on Anatomy in this town, in his younger days was for a long while annoyed by a spitting of blood, which threatened him with an attack of pulmonary consumption; at length an ulcer formed upon his arm, and shortly after the bleeding from the lungs ceased. The sore was an exceedingly obstinate one, and resisted for a great length of time all attempts that were made to close it; at last, however, it was accomplished, upon which the bleeding from the lungs once more returned.

A long-continued discharge from a blister has, upon being too suddenly checked, produced oppression of the brain.

Suppuration is best promoted by the application of heat and moisture.

CASE OF TETANUS.

We translate the following case of Tetanus from the valuable collection of Anatomico-Pathological Facts, by M. Tacheron:—

Bailler, nine years of age, of a lymphatic temperament, having always enjoyed good health, received April 25th, 1808, a violent blow of the fist in the epigastric region, which knocked him down. Towards the evening of the same day, he was seized with a sharp pain in that part, and convulsions of the muscles of the back.

On the 26th he entered the Hospital, and on the 28th he presented the following state:—Involuntary contraction of all the muscles of the body, less in the arms and neck than in the other parts; very acute pain in the epigastric region; continually lying on his back; mouth closed, and unable to open it;

hearing good, and answers correct. When, in order to raise him, he was taken by the head, the neck bent a little forwards; but if he was seized by the shoulders, his whole body was raised in the same manner as a stick would be, if lifted when placed horizontally; the state of tension was not, however, always the same; it was followed by a slight relaxation, which was soon succeeded by a strong contraction; respiration slightly oppressed; neck thrown back a little; jugulars prominent; tongue white; breath offensive; pulse small, hard, and wiry; bowels constipated; urine turbid, with a greyish sediment; contraction of the upper extremities less strong than that of the lower. Cataplasms and antispasmodic medicines were ordered him.

29th. Difficulty of breathing slightly increased; hollowness of the eyes; projection of the orbitary circles; spasmodic tension the same; constipation; urine of a lemon colour, with a grey deposit; other symptoms as before. He was ordered a laxative draught.

30th. Increase of symptoms towards night; very sharp pain in the legs; spasmodic tension stronger than yesterday; legs and thighs unable to be bent; contraction of the muscles of the hand less; breathing more laborious; slight cough; the mouth was opened with greater difficulty; pulse small and frequent; skin more dry and hot; urine scanty; constipation; disposition to bend the body forwards. Six leeches were applied to the right side of the chest, and some more medicines were ordered for him.

May 1st. In the same state as before. Some opium was prescribed. — Towards two o'clock in the afternoon, convulsions came on, and he died.

Examination of the Body.

The corpse was pale, stiff, and in a good condition.

The vessels of the membranes of the brain were gorged with blood; the brain itself also contained a good deal; but there was no fluid in the ventricles, or at the base of the skull.

The right lung was healthy; the superior three-quarters of the left were likewise so; the lower quarter presented evident marks of inflammation; it contained much blood, of a bright red colour.

There was no particular appearance in the heart.

The liver was of a greater size than natural; the stomach was contracted; four or five lumbricales were found in the ileum.

All the other organs were in a healthy state.

On the Destruction of the Fœtus Brain. By Mr. HAMMOND. *Communicated by* Mr. TRAVERS. *Read Jan.* 14, 1823.

[From the Medico-Chirurgical Transactions.]

A YOUNG woman of the name of Atfield, having an unusually narrow pelvis, could not expel

the fœtus by natural means; and it became necessary to diminish the size of its head.

An opening was made in the skull near the fontanelle, and a portion of parietal bone was removed; three fingers were introduced into the brain of the fœtus, the cerebrum was completely broken down, and about two ounces of brain taken out; the head and the whole of the fœtus were then quickly extracted. The child immediately cried heartily, and breathed in a perfectly healthy manner, and with the usual apparent strength. It bled considerably from the wound in the head; a dossil of lint was applied, and kept on by adhesive plaster. This seemed to moderate, but not to stop the hemorrhage; the child passed fæces and urine, and for twelve hours the functions of life seemed to be carried on in the usual and healthy manner, the child frequently crying loudly. After that time it became weaker, cried more feebly, looked very pale, and seemed gradually sinking; for ten hours it continued in this state; during the last two it was slightly convulsed. The bleeding from the wound, though not violent, never ceased, and the child appeared to die more immediately from the hemorrhage.

On examining the brain after death, I found the dura mater considerably torn, the cerebrum, throughout both hemispheres, torn and broken down, so as to appear a mere mass without organization; where the ventricles should have been was filled by clotted blood. The cerebellum, medulla oblongata, and spinal marrow, were not injured. The child lived forty-six hours.

This case may perhaps be useful in a practical point of view, as it tends to show that the removal of a part, and the destruction of the whole cerebrum, does not ensure death to the fœtus; and in such cases, where the head must be opened, it would be better to divide the medulla oblongata or the spinal chord; for the mother, who is generally prepared for the operation by the assurance that her child is already dead, suffers considerable pain on finding it born with life, but without brains.

An Account of a rare Case of Complicated Labour, from locking of the Heads of Twins. To which are subjoined Notices of two recorded Cases of the same description; with a suggestion of a Method for effecting Delivery under similar circumstances. By JOHN ALLAN, Esq. *Member of the Royal College of Surgeons. Communicated by* Dr. Davis. *Read April 3rd,* 1823.

At one o'clock in the morning, on the 11th of August, 1822, I was called to Mrs. Welch, a small spare woman, thirty years of age, in her third labour, who was stated, by the midwife in attendance, to have been eight hours in strong labour, with an arm presenting.

I found the membranes entire, but apparently containing no liquor amnii. The labour

had so far advanced, that the os uteri was completely dilated. The presenting limb proved to be a left knee, and with it the vertex of a head. I attempted to push up the knee, so as to cause the head to descend, but ineffectually, owing to the powerful and painful contraction of the uterus. The membranes being unusually tough, and not distended with fluid, were lacerated with some difficulty by the fore-finger introduced between the thigh and leg, so as to hook the child's ham. The knee was then pulled down, and the head at the same time was felt to retire upwards. The body having descended, the right arm was observed to be wedged between the occiput and the symphysis pubis, and was not disengaged without some difficulty, after the left arm had been extracted.

No pulsation being perceptible in the cord, I was proceeding in the usual manner to introduce two fingers of my left hand into the child's mouth, for the purpose of bringing the chin down to the breast, and hastening the delivery, when I discovered that the hollow of the sacrum was occupied by the head of another child, of which the body was still above the brim of the pelvis. The face of this second child was towards the sacrum, and its occiput was closely applied to the throat of the first-mentioned child. The back of the neck of the latter was closely applied to the symphysis pubis of the mother, and its face to the back of the neck of the child, whose body remained within the uterus. With the heads thus situated, it would have been impossible, even had the firm contraction of the uterus been out of the question, to have pushed upwards the one next to the sacrum, without carrying the other before it; and every attempt to extract that which was next to the pubes had the effect of pressing the other so forcibly downwards as to threaten a rupture of the perinæum. In this dilemma, I was at first rather doubtful what course to pursue; the case, so far as then known to me, being without a parallel: but, after a little consideration, I resolved upon a mode of completing the delivery, which will be described presently, and which may, perhaps, be advantageously adopted on similar occasions in future. Owing to the smallness of the children, it proved unnecessary in the present instance, both heads having been simultaneously expelled from the pelvis, by one powerful parturient effort, without any assistance from art. Both children were irrecoverably dead. They appeared to be six weeks or more before the full period. The mother had a smart attack of hysteritis, marked by uterine pain and suppression of the lochia, and accompanied with great excitement of the vascular system and severe intolerance of light. Three bleedings, amounting

together to seventy-six ounces, and free purging, with other appropriate means, removed these symptoms, and she recovered perfectly.

In the Edinburgh Medical and Surgical Journal, for January, 1822, a case very similar to this is described; in which, however, there was the peculiarity, that the head occupying the hollow of the sacrum had its occiput towards that bone, and the head next to the pubes had its face towards the left side of the pelvis.

It is stated, that the head nearest to the sacrum was perforated, with the design of making room, if not for extracting the other head entire, at least to admit of applying the perforator to it also. The latter alternative was found necessary; but even after both heads had been broken down, it was not without considerable force exerted by the operator, as well as by two gentlemen who assisted him, that the head next to the pubes was extracted. The extraction of the other child was then effected without further difficulty. The patient died of inflammation of the uterus and parts lining the pelvis, on the eighteenth day after her delivery, notwithstanding very active treatment and great attention on the part of her medical attendant.

Another case of this kind is related in the *Journal de Médecine* for November, 1771, in a letter addressed to M. Leveret, by M. Eneaux, a surgeon at Dijon, who states, that he succeeded in extracting, with the forceps, the head next to the sacrum, while the body of the other child, which had passed the os externum, was held up in the hands of an assistant over the pubes of the mother. The head of this last child was extracted with ease, after the body of the other. The writer adds, that the child which he extracted with the forceps survived, though not larger than a seven months' child; but that the other died, though corresponding in size to an eight months' child. The mother recovered well. M. Eneaux further states, that he ascertained, by examining the placenta, that both children had been contained in one set of membranes. This, I have some reason to suspect, was likewise the case with the woman whom I delivered; but on this point I cannot speak positively, having inadvertently lost the only opportunity for making the inquiry.

Should a case of this description occur about the seventh month of pregnancy, the mode of delivery by the forceps, which succeeded in the hands of M. Eneaux, might perhaps be attempted; but with twins near the full period of gestation, such a mode of delivery, if practicable at all, would be manifestly incompatible with the lives either of the mother or the children. I may, therefore, perhaps, be allowed to suggest for such cases, the

operation which, had the natural efforts proved incompetent to the delivery, I had resolved to perform in the case described above. This consists in detaching the body that has passed the os externum from the head, pushing the detached head further above the brim of the pelvis than it is already situated, and then extracting, with the forceps, the head occupying the hollow of the sacrum, provided the natural efforts should still prove inadequate. After the extraction of this child, the separated head of the other would remain to be extracted with the forceps, or such other suitable instruments as might be necessary. In this manner the lives of the mother and one of the children would most probably be effectually saved; while the life lost would only be that of a child so situated that it would appear impossible to devise any practicable method for its preservation. Its death must inevitably ensue in a few minutes, even if no operation whatever were attempted, from the pressure that must unavoidably be made upon the umbilical cord; so that there will be no necessity for applying a cutting instrument while the child is alive.

In concluding this account of the present case, I have great pleasure in acknowledging, that, for the opportunity of treating it and others, I am indebted to the friendship of Dr. Davis.

To the Editor of The Lancet.

Sir,—As the instrument you use is calculated to reduce those systems which are overloaded with what the old school would have considered vitiated fluids, I wish to call your attention to a morbid condition of that body to which the public applies the general term of THE FACULTY; in which sweeping appellation is included many beings who have nothing but self-appointed titles, by which they gull the community. We see over the shops, and at the private doors of self-taught druggists, in splendid letters, Surgeon, &c. —Surgeon and Accoucheur, &c. &c.—and, by the effrontery and speciousness of these displays, the multitude believe them worthy of every confidence; and the regular and respectable young practitioner is overlooked and daily insulted through these exhibitions. Now, as there is no redress to be had by an appeal to the legislature, I, as a young though regular surgical graduate and general practitioner, think it would be advisable for those who are in like circumstances to assume some designation which would mark the authority with which we offer our services to the public, and which might be a means of salutary depletion. I would propose that, instead of the term 'surgeon,' every member of the college, who deems it right to express the nature of

his profession on the front of his dwelling, should write up 'Collegiate Surgeon.' If this suggestion be deemed worthy of consideration, you will oblige me by giving it a place in The Lancet.

I am, yours respectfully,

JUVENIS,

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London, Oct. 24, 1823.

REMARKS ON RESPIRATION AND DIGESTION.

I HAVE had, says a celebrated traveller, frequent opportunities of remarking a beautiful balance betwixt RESPIRATION and DIGESTION.

During a putrid fever, which attacked me last summer, it was too evident to escape the observation even of my nurses. When the stomach was oppressed, respiration laboured; and when the lungs were plentifully supplied with vital air, the breathing became easy, and the superabundant quantity of food was no longer a burden.

I am happy to find my ideas on this subject confirmed not only by my physician, to whom I first practically noticed it, but also by the correspondence between two of the most ingenious medical practitioners and chemists of the age, Dr. *Withering* and Dr. *Beddoes*. The former, writing to the latter, says,—The experiments you wish for on the subject have been in part made. The late Mr. *Spalding*, who did so much in improving and using the diving-bell, was a man of nice observation, and had he not fallen a sacrifice to the negligence of drunken attendants, would have thrown much additional light upon more than one branch of science. He particularly informed me, that when he had eaten animal food, or drunk fermented liquors, he consumed the air in the bell much faster than when he lived upon vegetable food, and drank only water. Many repeated trials had so convinced him of this, that he constantly abstained from the former diet whilst engaged in diving.

In my putrid fever, whenever the air of my bed-chamber was artificially *oxygenated*, as my physician often witnessed, my respiration was pleasant, the oppression at my chest relieved, and I was enabled to breathe freely through the nostrils without the assistance of my mouth, which I could not do before the room was oxygenated. At the same time I am convinced that my appetite was greatly increased, my occasional sleeps rendered sound and undisturbed, and my digestion considerably quickened.

We now see the reason why men who are oppressed with food, *pant*; and why, in a close room, where they are confined within the curtains of a bed, where the air is vitiated by passing frequently through their lungs, they open their mouths wide to breathe, and therefore why they *snore*.

I have often had occasion to converse with miners in Cornwall, who had been almost deprived of life by breathing a mephitic air, and have been informed by them, that on reviving, they have constantly been seized with nausea, and that, commonly, the stomach has rejected its contents quite crude.

Whenever the imperfect tribe of animals, of such as sleep out the winter, are exposed to a cold so great as. in a great measure, to rob them of their inbred heat, their powers of motion are proportionably diminished; and as they cannot have, at that season, a very copious generation of caloric, but only enough to keep up the spark of life, their animal oil, which is composed of principles attractive of oxygen, being sufficient for that purpose, they lose also the power of digestion*.

At Belleisle, in the beginning of the winter, 1761, I conveyed, says *John Hunter*, worms, and pieces of meat, down the throats of lizards when they were going into winter quarters, keeping them afterwards in a cool place. On opening them at different periods, I always found the substances which I had introduced entire, *and without any the least alteration.*

A hedge-hog, while the heat of the body was at 30 degrees, had neither desire for food, nor power of digesting it; but when, by artificial means, it was increased to 93 degrees, the animal seized a toad which happened to be in the room; and upon being offered some bread and milk, it immediately ate it. The heat roused up the actions of the animal economy; the breathing became quickened; and the blood, having imbibed a greater quantity of ogygen air, containing latent fire, to be extricated by the principles separated by the stomach: hence the immediate call on the digestive powers of that organ†.

* Observations on Digestion, by John Hunter. This accurate experimental philosopher has the *muscular* animal heat, the *digestive*, and the *procreative*, to mark the three intensities; or rather the three effects produced by different degrees of *oxygenation* in the animated world.

† The anatomica Lecturer at Pisa, in the year 1597, happening to hold a lighted candle nea the subject he was dissecting, on a sudden the vapours that issued from the stomach and intestines were set on fire. In the same year Dr. Ruish was dissecting a woman, and had no sooner opened the stomach than there issued out a yellow-greenish flame, supposed to have arisen from the vapours, which were kindled by a student's holding a lighted candle near him. Dr. Vulpare, the anatomical professor at Bologna, affirms that any one may see issuing from the stomach of an animal, a vapour that *burns like spirits of wine*, if the upper and lower orifices are bound fast with a tight thread. The stomach thus tied, must be cut immediately under the upper ligature, the contents of the stomach being first pressed with both hands, so as to pass to one side. A candle being held about half an inch from the aperture, a flame will be observed immediately to issue from the stomach. Bartholine relates the case of a person who, having drunk much

It has been proved that vital heat arises from the decomposition of air in the lungs. We shall now show, HOW LIFE DEPENDS ON A CERTAIN DEGREE OF HEAT IN THE BODY.

In the chick contained within an egg there are no powers capable of generating heat. Therefore, until the chick receives heat from the mother, it remains in a torpid and inactive state. The principles of life are then called into action. A gradual extension of the parts commences. During the time of incubation, the living principle every day increases in quantity and power with the perfection of the animal, and the capacity of its organs for performing its functions, and generating heat, which last does not happen till the time of its exclusion from the shell: after which, the chick does not depend *entirely* on the mother for the production of that heat which must always accompany and support the functions of life. When, by respiration, the first action after birth, oxygen air is absorbed by the blood, the motion of the heart, the circulation, and other operations, are carried on with greater vigour than formerly, and the food being separated into principles attractive of oxygen, the chick is capable, in a great measure, of generating a degree of heat equal to that of the parent. At first, the mother, by a wonderful instinct, as if conscious of the tender

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brandy for a wager, died, after an eruption of a flame of fire had first issued from his mouth. *The inflammable woman of Coventry*, as described by Mr. Wilmer, appears also to have reduced herself by dram-drinking to such a state as to be capable of being set on fire, and burn like any very combustible matter, "so eager," says the learned Dr. Beddoes, "were the principles of which she was composed to combine with oxygen." In like manner the Countess Cornelia Bandi, near Cesena in Romagna, in 1731, in the sixty-second year of her age, was found in the middle of her bed-chamber reduced to ashes. These ashes were light, and left in the hand a greasy and stinking moisture; the floor was smeared with a gross unpleasant moisture, and the walls and furniture were covered with a moist soot.

An instance of the same kind occurred at Christ Church in Hampshire, June 26, 1613. One John Hitchell, a carpenter of that parish, having ended his day's work, came home and went to bed. His wife found him dead before morning at her side. He felt so extremely hot, that it was impossible to touch him. *He lay burning for three days*; nor was there any appearance of flame outwardly, but only a smoke or mist ascending from his carcase till it was consumed.

Grace Pett, a fisherman's wife of the parish of St. Clement's, Ipswich, about sixty, was also consumed by an internal fire. She appeared like a heap of charcoal, covered with white ashes; the legs, arms, and thighs, were very much consumed. However, it is remarkable that the deal floor on which she was extended had no appearance of being in the least singed.

These remarkable instances of the *quick combustion* carried on in the body, if I may be allowed to continue the expression, are adduced only as exceptions to Dr. Thomson's general rule, that within the body there is always carried on a *gentle combustion*, productive of the *vital flame*.

state of her progeny, and of the impossibility of their being kept sufficiently warm by their own powers, gathers them under her wings, to cherish that vital warmth, which she appears to judge them capable of creating, and without which they would necessarily perish. In the same way, if, during incubation, the hen leaves her nest so long as to cool the eggs a few degrees, from that period the powers of life are proportionably diminished, and a stop is put to the growth of the chick; both of which, if the eggs have not been cooled too far, are recoverable on the return of the hen, or of that genial heat they receive from her body. The mother is so solicitous to preserve this heat, that she seldom leaves her nest above five or six minutes in the day, to take a slender repast; and when she discovers the motion of the chickens in the eggs, she then sits so close, that even the sight of food, though ever so much pressed by hunger, can scarcely prevail with her to stir from the eggs for three or four days, or until they are completely hatched. But if she abandons her nest altogether, or is killed by accident, then, as the eggs cool, the powers of life gradually decline, till they are at last totally abolished by the death of the chickens*.

* From Dr. Gardiner on the Animal Economy.—Though the functions of life are suspended for want of a due quantity of animal heat, yet in some creatures, under these circumstances, the vital principle still remains entire. Thus flies, when the cold comes in, appear as if deprived of sense, and in proportion to the degree of cold, the moving mechanism is retarded. But if the weather be intensely cold, they then sleep the sleep of death. Hence the reason why we see toads burrowing, frogs living under large stones, snails seeking shelter in the hollows of trees, and fishes having recourse to deep waters; the heat of all these places being generally above the freezing point, even in our frosts, which are however sometimes so severe, as to kill many whose habitations are not well chosen. Nevertheless these torpid animals still maintain a temperature of heat somewhat higher than the surrounding medium. In the winter, the atmosphere at 44 degrees, the heat of the torpid hedge-hog at the diaphragm, was found, by Mr. Jenner, to be 48 degrees and a half. When the atmosphere was at 26 degrees, the heat of a torpid hedge-hog was reduced so low as 30. In summer, the atmosphere at 78 degrees, the heat of the hedge-hog at the diaphragm was found to be 97. The atmosphere being at 30, that ingenious physician, and most experimental philosopher, Dr. Heighton, the Lecturer on Physiology at Guy's and St. Thomas's hospitals, found the animal heat of a torpid bat at 33; and when the atmosphere was at 60, he found it so high as 63 degrees; that is, during life the vital heat was always found to exceed the surrounding medium. *Vide John Hunter's Observations on the Animal Economy.*

LECTURE IX.

ULCERATION.

ULCERATION is the absorption of any constituent part of the body. I have already endeavoured to explain to you, that

under the increased action of the vessels which accompanies inflammation, an increased deposit takes place from the arteries; also that this deposition is according to the stage of the inflammation, and the part which the inflammation attacks; that the inflammation is either adhesive or suppurative, and that it ends in the one state in the immediate production of the process of adhesion, and in the other in the effusion of a quantity of purulent matter from the extremities of the vessels.

But inflammation has not only an influence on the arteries; it has also an effect on the absorbent vessels, which are thrown into a state of inordinate action whenever any considerable quantity of blood is thrown upon them. There is a natural balance between the action of the arteries and the absorbent vessels. In a state of health, and at the adult period of life, the portion of matter deposited by the arteries, and the portion taken into the system by the absorbent vessels, are, as nearly as possible, balanced. In youth a greater quantity is poured out by the arteries than the absorbents remove; but in age a smaller quantity is deposited than absorption is taking away. You find, therefore, that the balance is destroyed in a different manner at different periods of life; but when a considerable and inordinate absorption takes place of some part of the body, that absorption is denominated ulceration.

It was formerly thought, that it was necessary to the ulcerative process, that matter should be formed; but this is not the case, as ulceration often occurs without being accompanied by any purulent secretion. The formation of matter, therefore, is not necessary to the process of ulceration. The great cause of ulceration is *inflammation united with pressure.* If the inflammation be considerable, and the pressure but slight, ulceration will be produced; and if the pressure be very considerable, and the inflammation but slight, still there will be ulceration. As a proof, both that pressure is the cause of ulceration, and that ulceration is not necessarily accompanied with the formation of matter, I will give you the example of aneurism. Here is a specimen on the table of a large aneurism of the aorta, just above the heart, into which you may pass your hand in the hole produced by the ulceration of

part of the ribs and sternum; those parts having been absorbed by the pressure of the aneurismal sac, producing an increased action of the absorbent vessels. Here the pressure is exceedingly great; but the degree of inflammation is very slight. In the same manner we see an aneurism of the aorta on the fore part of the spine, producing absorption of the vertebræ, by the pressure of the aneurismal bag, though no matter is effused, the ulceration being produced by the pressure arising from slight inflammation unaccompanied by any secretion of matter. From all these facts, we are led to conclude that the formation of matter is not necessary to the ulcerative process; and that it only happens on exposed surfaces of the body, where it is necessary for the protection of sores, by covering the granulations.

The constitutional symptoms of ulceration are slight. In general, a degree of fever attends it; but it is very slight. The pulse is under 100, and at the same time small; we do not find any considerable excitement of the constitution, and the fever is rather of the hectic or chronic kind, than sudden or violent in its attack. It continues sometimes for several days. The pain attending ulceration is not very considerable; if you ask the patient, he will tell you that it is of a gnawing kind, as if there were insects about the part. We may conclude, therefore, that the *irritation attending ulceration is but slight, and the pain not considerable.* With respect to the appearance of the ulcerated part, it looks as if it were worm-eaten; the surface is rough, and very irregular.

Sometimes a very considerable portion of the body is removed by ulceration. Here is an example of an ulcerated tibia on the table. See to what an extent ulceration has removed not only the cancellated structure of the bone, but the shell in which that structure is contained. Here is another example in which a great part of the tibia has been removed; the ulceration has extended six or seven inches, so that little more than the fibula of the leg remains: such is the power of the absorbent vessels, of feeding, as it were, upon themselves.

The ulcerative process is sometimes extremely rapid in its progress: as much will be destroyed in the course of a few hours as will require weeks and months to repair. In pro-

portion to the extent of surface destroyed will be the difficulty with which that surface is closed. Something will depend, also, on the form of the ulceration, and the kind of surface exposed; but the general rule is, that the difficulty of the reparative process is proportional to the extent of surface destroyed.

It is a curious law, with respect to the ulcerative process, that it has a tendency to the nearest external surface of the body. This is a law which is attended with the most salutary effects; for, if it were otherwise, the body would very frequently be destroyed by the ulcerative process. In consequence of this tendency, matter formed at a depth in the body finds its way through the integuments, instead of proceeding through the more important parts. Many examples may be given of this law. One of the most remarkable is this:—Matter forms not unfrequently behind the sternum close to the pleura and pericardium, which membranes are extremely thin —not so thick as paper. From the proximity of these membranes, it might be expected that the matter would generally open into the pleura, and, by discharging itself into the cavity of the chest, destroy life. Instead of this, however, the pleura undergoes no other alteration than that of becoming thick; and while it is acquiring this addition of substance, the process of absorption is going on in the inner part of the sternum, an aperture is formed through it, and the matter makes its way through the bone and integuments, rather than through the pleura and pericardium. The same circumstance takes place with respect to the peritoneum. If matter be formed in the abdominal muscles, the peritoneum is very rarely absorbed to admit the matter into the cavity of the abdomen; but the matter makes its way through the integuments, and finds an outlet on the surface of the body.

So in an abscess of the liver, the matter is discharged, not through the skin, which is a more remote surface, but into the cavity of the intestines, whence it is carried off by stool, or discharged into the stomach, from which it is thrown up by vomiting. These effects are produced in the following manner: the surface of the abscess becoming united with a portion of intestine or stomach by the adhesive process, the ulcerative action commences, by which a communi-

cation is formed between these surfaces, and the matter is discharged in the manner before mentioned, without danger, or at least with little danger, to life.

The same thing takes place in absorption of the bones. Thus, in ulceration of the tibia, the matter breaks through the skin, on that surface which is only covered by skin and periosteum. This is a law in part depending on the less vitality and greater irritability of those parts which are nearest the surface of the body. The external parts of the body are the most weakly with respect to circulation, and most readily absorbed. I do not mean to say that they are weakly with respect to quantity of blood, for they possess a considerable share of vascularity; but they are weakly with respect to the living powers. The external parts of the body are more irritable, and more subject to vicissitudes of action from corresponding changes of temperature than other parts of the body. They have less strength of circulation, and, consequently, give way to ulceration more readily than those parts which are more deeply seated, and possess a greater strength of circulation. Another reason is, that the adhesive process goes on gluing the more internal parts, while the external, which are thin and weak, become united to these parts, and in this way form a considerable solid. An instance of this is found in the adhesion of the pleura to a lung, so as to form one structure. It may be considered, then, as a law of the animal economy, that the ulcerative process has a disposition towards the nearest external surface of the body.

Those parts of the body which are newly formed are more liable to be absorbed than those which have long existed. A part covered by a cicatrix proceeds rapidly to ulceration, because it is more weakly constituted than those parts which have existed longer. The irritability of a part is proportional to its weakness; and the parts which are weak and irritable fall most readily into the ulcerative process. To take a familiar illustration—When a child labours under symptoms of constitutional derangement in cutting a tooth, why do you lance its gums? You cut the gums, not for the purpose of making an immediate passage for the tooth, and procuring immediate relief to the child, but because, when the gum by the adhesive process

heals upon the divided part, a cicatrix is produced by this little operation which is very readily absorbed; and the result is, that when the tooth rises, the child cuts it with much less pain and irritation than it would otherwise have done. If a man have inflammation in his leg, and this falls near a place where ulceration previously existed, the scar produced by the old ulcer gives way much more readily than the original skin. I have observed that if a patient under gonorrhœa has had an abscess in the urethra, which will now and then happen in consequence of suppuration of the lacunæ, or if from the same cause he has had an abscess in the scrotum or on the side of the penis, if he should get a second gonorrhœa, he will be sure to be attacked with a similar abscess. Proceed with as much care as you may—guard against inflammation with all possible caution—and yet, if he has had abscess in the first gonorrhœa, it will infallibly return in the same part, if he get a second.

One of the most remarkable instances of the readiness with which the process of absorption attacks newly-formed parts, may be seen in Lord Anson's Voyage round the World—a work which, I doubt not, is generally known to you. It is a most able and entertaining publication; and if any student has not read it, I can strongly recommend it to his perusal: for, while professional knowledge should undoubtedly be the first object of your pursuit, general literature should not be neglected, and is so far from being incompatible with that primary object, that it cannot fail to enlarge your views, and give efficacy to your professional researches. So intimate is the connexion between every object of useful and scientific inquiry, that there is hardly one branch of knowledge which does not in some measure throw light and illustration upon another. — The circumstance which I am about to mention may illustrate this remark. Lord Anson's book is one of the most valuable works which has appeared on nautical subjects; nor is it without its use as illustrative of a principle in surgery. Lord Anson's expedition to the Pacific Ocean was undertaken with a view of destroying the power of Spain in the New World. As he was obliged to sail sooner than he expected, many of the crew which he took out were invalids, some having cicatrices, and others

having previously had fractured bones. In his passage round Cape Horn, he encountered very severe weather; many ships were obliged to return; some were lost, and the crews of those which succeeded in getting at last to the Isle of Juan Fernandez suffered great hardships. In doubling Cape Horn, the crew suffered severely from attacks of the scurvy; and it was remarked by the clergyman, who was an observing man, though he knew nothing of our profession, that the men who had had ulcers before were invariably attacked with ulceration in the same parts, and that if their bones had been formerly fractured they became disunited.

This does not surprise us, because we know that scurvy produces the ulcerative process, attacking the gums, causing profuse bleeding, &c.; that the ulcerative process has a stronger disposition towards parts newly formed, and that in this case, therefore, it appeared in parts where ulcers had formerly healed, and in disunited limbs where callus had previously formed. When the men got fresh vegetables, &c., on shore, they recovered their health; their bones united, and their sores healed. There cannot be a better example than this for the purpose of showing the readiness with which newly-formed parts ulcerate, as compared with the original structures of the body.

The parts more remote from the heart ulcerate more readily than those in the vicinity of the heart. This circumstance led me to say, that when the vital action is feeble, and the power of the circulation diminished, we find a greater disposition to the ulcerative process than otherwise. Thus for one ulcer in the arm we find twenty in the lower extremities; and you cannot but have observed, in going round the wards, the great number of sore legs, those opprobria of our hospitals.

In those parts which are endued with little vital power, ulceration takes place very readily; while in those to which the quantity of blood sent is very small, ulceration takes place with difficulty. This is the case with tendons. Tendinous parts possess very little blood; very few arteries or absorbent vessels are distributed to them. Hence the process of absorption goes on with great difficulty, and tendons will slough to a great extent rather than become absorbed. This circumstance must influence our practice. In abscess under the fascia, an inci-

sion should be made as soon as possible through the covering, to liberate the confined matter. So in abscess of the finger, when the constitution suffers because the theca will not give way to the process of ulceration, and the nervous system becomes irritated by the pressure of confined matter, an early incision should be made to liberate the matter, and give relief to the constitution. The same practice should be pursued in abscess of the palm of the hand.

The ulcerative process is useful to the animal economy, in removing extraneous bodies from the system. Thus a ball lodged in the body, and a ligature round an artery, are disengaged by the process of ulceration. It is useful also in the exfoliation of portions of bone, in separating parts which would otherwise remain in the body, perhaps for the remainder of life. In three or four months a considerable portion of exfoliated bone will be separated by the ulcerative process. You will find a case of popliteal aneurism in the other Hospital, where the leg has sloughed a little below the calf. Almost the whole of the leg has separated, except the tibia and fibula. A very small portion still remains to separate. By my advice nothing has been done to the living solids, and the process of nature is left to take its course. You will soon see that the bones themselves will separate by the process of exfoliation, and thus nature will herself perform the operation of amputation without loss of blood, or any danger to life.

I shall now proceed to the consideration of

ABSCESSES.

An Abscess is a collection of matter in a cyst, produced by inflammation. What happens in the formation of abscess is as follows: First, there is an inflammation of the adhesive kind in the cellular tissue, by which the different cells of the cellular membrane become filled with adhesive matter. A slight ulcerative process takes place, the inflammation still proceeding, and a little cavity is formed by the ulcerative process, a space being left for the effusion of pus, the result of the second stage of inflammation. A drop of matter is secreted into the cavity, and as soon as it is poured out, the pressure on the side occasions an increase of the ulcerative process, which adds to the cavity previously formed. More matter is then produced, and the surrounding solids, having a tendency to the

ulcerative process, it is accumulated, so as to lead to absorption of the neighbouring parts. In the formation of abscess, the matter does not produce absorption of all the parts around equally, but it excavates chiefly on the side towards the skin, and very little in the opposite direction; a circumstance which led to the reflection, that matter had no power of eroding, as was formerly supposed, when it was thought that matter acted chemically on the solids like an acid, or caustic alkali.

Abscesses are dangerous according to the following circumstances:—

First, from their size. It is not, however, the quantity of matter produced which renders them dangerous, but the difficulty which nature has in repairing the devastation made by excavation of the solids, from the pressure of the matter.

An abscess may discharge a quart of matter, and the constitution may have been scarcely affected by it; but very soon after it is opened the constitution begins to suffer. It is not, therefore, the quantity of matter, but the process of restoration after the evacuation of the matter, which affects the constitution. The largest abscesses which occur in the body are those of the liver. Patients will sometimes recover from abscesses of this part, in which immense quantities of matter have formed. I remember one of enormous magnitude, from which the patient recovered

Case.

Dr. Saunders, the lecturer in medicine at Guy's, asked me to see a woman who had a large abscess in the side. I made an opening into it with a lancet, and it discharged a surprising quantity of matter, as much as would fill two-thirds of a wash-hand basin. I have heard, indeed, of much larger quantities of matter having been discharged. After pressing out the matter, I passed a roller tightly round the abdomen, and brought the parts together, with a view of producing the adhesive process, which now and then occurs. I did not see the patient again, but some days after I met Dr. Saunders, who asked me how I thought the patient was going on. I told him, I supposed he asked me, because he thought me very sanguine; and he replied, that I should be gratified to learn that the woman was doing extremely well. In fact, the orifice had

closed; no more matter was discharged, and the patient got well without any bad symptoms. I have mentioned this case, because it may guide your practice when you are operating upon large abscesses, and show you the propriety of endeavouring to procure the adhesive process, by bringing the sides of the abscess together. Very large abscesses sometimes terminate favourably, but in a great number of cases they destroy life.

The next circumstance which renders abscesses dangerous, is their number. Thus, the great number of little abscesses on the surface of the body, in small-pox, frequently destroy life. Here nature performs the suppurative process; the pustules die away, and the cuticle is separated from the surface of the body; but nature has not the power, in many cases, of repairing the destruction of the cutis; the exposure of the nerves of the skin occasions great constitutional irritation, and the patient dies, as if destroyed by a burn or a scald.

Abscesses are also dangerous, from their being situated in vitally important parts, such as the brain, heart, or lungs; or when they are not seated in parts of vital importance, from their pressure on essential organs.

Cases.

A woman was admitted into this Hospital for a complaint in the throat, occasioned by swallowing a pointed bone. All she complained of, at first, was a soreness in the throat; but she was shortly after seized with difficulty of breathing, which increased greatly, and she died. On examination after death. I found, upon making an incision into the pharynx, that between it and the fore part of the vertebræ, a large abscess had formed, which, by pressing the pharynx forward on the epiglottis and glottis, occasioned difficulty of breathing, and in the end destruction of life. Shortly after this, Dr. Babington came to this Hospital with a friend of his, who was labouring under great difficulty of breathing. He requested me to examine his throat: having put my finger on the back of the pharynx, and felt fluctuation there, I told him that this was a case of which I had seen an instance, where the patient had died from a collection of matter formed in the same situation. I immediately procured a seton needle, and including it in a canula, like a trocar, I

put it down into the pharynx, let out a considerable quantity of matter, and the patient was relieved. Here was a case, which, but for this operation, would probably have terminated fatally, by the pressure of the matter on vitally important parts. In the same manner, abscesses in the perineum, or between the prostrate gland and the rectum, will, by their pressure on the urethra, occasion irritation of that part, and sometimes complete retention of urine. Thus, we find that abscesses, though situated in parts not of themselves vitally important, sometimes become dangerous by their pressure on more important parts.

LECTURE X.

At the conclusion of our last Lecture, Gentlemen, we stated that the danger attending the formation of abscesses arose from their size, number, and pressure on important parts; and lastly, that when they formed in important parts themselves, they generally proved destructive to life.

Another danger which we did not then mention is, when abscesses occur between bones and the covering of bones. Whenever bones form the boundary of abscesses, such abscesses are exceedingly tedious, and in most cases dangerous. Thus it is in psoas abscess: in this disease the matter begins to collect on the fore part of the vertebræ, and proceeding through the hollow of the psoas muscle till it reaches the groin, where it makes its appearance just below Poupart's ligament; and from examination of these cases after death, the vertebræ are found ulcerated. It is not my intention this evening to enter into the consideration of psoas or lumbar abscesses, as they will be treated of on another occasion, but I just mention the complaint to show the danger of abscesses between bones and their coverings; and the reason of it is, that the process of exfoliation takes place, and they then become very long and tedious in their progress.

Abscesses are *acute* or *chronic*. The common course an acute abscess takes is three weeks. The adhesive inflammation first begins; this is succeeded by the suppurative; and, lastly, the ulcerative process comes on; and it is generally three weeks from its commencement before matter is discharged. But chronic abscesses are slower in their march; take, for instance, the psoas abscess to which we have

alluded; it is often six months before matter makes its appearance in that complaint. If a person comes to you with a psoas abscess, and you ask how long he has had pain in his loins, he will tell you for four, five, or six months past; seldom less than four, and generally for the space of six months.—There are varieties in the irritability of different constitutions, but if you see a man with swelling in the groin, which, when he coughs, rebounds under your hand, and has a fluctuating feel, and who has had for four or five months pain in his loins, you will say that it is psoas abscess; so these are the criteria by which you are to know it. Chronic abscesses sometimes occur in the female breast.

Cases.

A lady was sent to me from Sussex some years ago, to have her breast removed: knowing the surgeon who had recommended this person to me to be an intelligent man, I did not attentively examine the breast, but said to the lady, I will call on you soon, and perform the operation. I fixed the day, and was about to perform the operation, the patient being seated in a chair before me, when I said to the gentleman (Mr. Edwards,) who was assisting me, I think that I feel a sense of fluctuation here, at least I will not proceed to remove the breast till I have ascertained whether it be matter. I took a lancet, and made an opening into it, and out gushed a quantity of matter. Thus a chronic abscess had existed in this part for a considerable time. Very lately, while going round Guy's Hospital, one of the young gentlemen, or, I believe, Mr. Key, brought me a woman who had a chronic tumour of the breast. On examining it, I perceived a slight fluctuation, and stated that most probably it contained matter, but was told, in reply to this observation, that it had existed for four or five months; I said, however, it did not signify—asked for a lancet—made a puncture into it, which let out a quantity of matter; and went away smiling. I merely mention to you these cases to put you on your guard: for I have seen breasts removed, which were only chronic abscesses; and thus, from an ignorance of this circumstance, you might put your patient to a cruel operation, where a small incision would have done.

In the treatment of acute abscesses, the best medicine

you can give is the liquor ammoniæ acetatis, sulphate of magnesia, and opium; six oz. of the first, one oz. of the second, and a drachm of the tincture of opium, of which the dose is three or four tablespoonsful three times a day. By this medicine you lessen irritation, and expedite the suppurative and ulcerative processes: no medicine that I have observed, under such circumstances, gives so much relief. The sulphate of magnesia prevents any costiveness from the opium, and the opium tranquillizes the nervous system, and lessens pain. The local treatment consists in the application of fomentations and poultices: and why, you may ask, use both these remedies? To promote heat and moisture, a greater quantity of blood is sent to the part, and a relaxation of the vessels takes place; this expedites the suppurative process, and that being done, the ulcerative process takes place with more ease. The kind of poultice to be applied to the part is of little importance; linseed-meal and water, bread and water, &c. No stimulating application would do; the object is to preserve the heat and moisture of the part, and to prevent evaporation: let the part be enveloped in oil-silk, for, by its assistance, the heat of a part is preserved, and evaporation prevented. It is desirable in the suppurative process to prevent evaporation; oil-silk is what is generally used then in private practice; it is clean, agreeable to the patient, and most conducive to his comfort.

Before proceeding to the consideration of chronic abscesses, I will say a few words on the opening of abscesses. If an acute abscess seems disposed to go through its different stages without any interruption, the best practice is to leave it undisturbed. Acute abscesses, beginning under aponeurotic fasciæ, ought to be opened as early as possible; the earlier the better. The moment one drop of matter may be felt to fluctuate, it is advisable to make a free opening, both as it regards the constitution and the part. Whenever the matter can be felt close to bone, it will be right to open it, excepting in cases where it may occur, from severe courses of mercury, between the cranium and pericranium. Mercury will inflame the periosteum (and the pericranium is a part of the periosteum) to a greater degree than the venereal disease itself; and in those cases where

a fluid exists between the pericranium and bone, unattended with any blush, do not open it; it will be removed, by purging, and giving bountifully the decoction of sarsaparilla. But when matter is formed, and there is a blush, it will not be absorbed; an opening must be made, exfoliation will often take place; but where there is no blush, beware of opening the tumour.

Now, Gentlemen, the treatment of chronic abscesses will be very different from those of the acute kind. In the last case, you wish to diminish the state of excitement in the constitution; and in the former you do all you can to give it additional powers, by allowing generous diet, and giving the patient ammonia and bark; the ammonia is the medicine on which the principal reliance is to be placed. You know that of late bark has not been much used; but people are apt to run into extremes—bark assists the suppurative process; generous diet must be allowed, in order to increase the action of the parts, by giving tone to the constitution. Stimulant poultices should be applied to the part, and the best I know is the muriate of soda (common salt) and water, a meat-spoonful of the salt to a pint of water, and the poultice should be wetted with this; yeast and oatmeal, vinegar and flour, each of these expedite the process of suppuration. In indolent cases, it is customary to employ stimulant plasters, and the best I know is the empl. galb. comp.; it is stimulating, and consequently excites the action of the part. The emplast. ammon. cum. hydrarg., and the emplast. thuris comp. are also used; they, however, are more tranquillizing, and in general excite slight perspiration over the part, similar in its operation to the soap cerate, which is also of use.

These, then, Gentlemen, are the remedies, local and constitutional, to be used in chronic abscesses; but it remains now to be considered how to treat chronic abscesses, when it becomes necessary to open them: I shall now proceed to tell you. Suppose you are called to a case where there is a collection of matter under the fascia lata of the thigh (the largest in the body), extending, as it often does, from just above the knee to the trochanter major,—what would you do? Open it certainly—make an incision, half an inch in length, and squeeze out all the matter you can. Having done this, apply a roller, making the turns all

over the thigh, with the exception of the opening; the result of this is, in many instances, that adhesive inflammation is excited, and thus the sides of the cavities are often readily united; always take care, in the application of the pressure, to leave the mouth of the wound uncovered. The same directions are to be attended to in collections of matter, when met with under the tendinous expansion which covers the muscles of the leg and fore-arm; the object is to endeavour to produce the adhesive inflammation, just as in the case of abscess in the liver, that I stated to you on the last evening, from which the matter was evacuated by the puncture of a lancet, and afterwards by means of pressure; the adhesive inflammation took place, and the recovery of the patient was the consequence. This, then, is to be your practice, to endeavour to procure a union of the sides of the cavities by the adhesive process.

Another reason for the early discharge of matter is the prevention of scars, particularly in exposed parts of the body. This may appear to you of little consequence, but I tell you it is not so: scars, from abscesses in the neck of females, excite in the minds of most of our sex a reluctance to associate with them; and thus many a fine young girl may, for these blotches and scars, be doomed to perpetual celibacy. No part of the practice of surgery has been so bad as the manner in which wounds on the neck have been treated. I have seen on one side of the neck large scars from old wounds that had been badly managed, whilst on the other side, where the treatment had been more skilful, scarcely any vestige of a wound was to be seen. I have, from very early in life (and subsequent experience has proved to me its use), been exceedingly careful in the management of these cases. Aperients, with calomel and rhubarb, should be given; evaporating lotions should be used. You must be strict as to diet and regimen; for though the patient be debilitated, he must be made still weaker. The best mode to adopt in these cases, is to open the tumours before the skin is much affected, and before a blush has appeared, and scars will in general be prevented. It is desirable, in opening the tumours, to use a very fine knife, for two reasons:—1. A small opening is made; 2. It does not alarm the person. The knife I always use, is the one

contained in the eye-case, for cutting up the cataract, the blade one-eighth of an inch wide, and it appears to the patient as a needle. When you press the sides of the wound, take care to squeeze out all the solid flakes of matter to be met with in scrofulous tumours. If this be not attended to, they will at last slough; but if, on the contrary, you carefully avoid leaving any of that unorganized substance, adhesion will take place, and the wound heal up. Every thing in these cases depends on getting rid of the solid matter. Bread poultices, wetted with a sulphate of zinc lotion and spirits of wine, may be used afterwards.

Case.

Whilst living at Broad-street, in the City, a lady came to me with a tumour in the side of the neck. I perceived on the opposite side several scars; I said, "Will you allow me to try if I can prevent a scar here?" She answered, it was for that purpose she had consulted me. Warm poultices had been used on the previous occasions, with which I would have nothing to do in this, and she got well with scarcely a pimple to be seen. It is of the highest importance, then, to endeavour to prevent those appearances which, on the exposed parts of the body, produce such painful feelings. In the higher orders of life particularly, a child with scars and blotches on its neck would be secluded from society.

Now, Gentlemen, there is a point of great importance to be attended to, viz.—the direction in which you make the opening: always make it transversely, and not in the axis of the neck; for when the wound heals, it will be scarcely seen among the creases or folds of the neck. One more observation on this subject: let me entreat you not to open these tumours when they have a blush on them like the hue of a grape; the veins are in a dilated state, and if you open the tumour, you will bring discredit on yourself. If the edges of the wound should not unite in any part, a little injection of sulphate of zinc or copper may be used.

There are two other points connected with this subject, which I will mention to you, and then I shall have done.

1. The causes of hectic fever You are all aware that a continued fever, *i. e.*, rigors followed by heat, and a sweating stage, attend the formation of matter: these rigors take place once or twice in twenty-four

hours, according to the irritability of the part and constitution; and had it been asked, thirty or forty years ago, on what it depended, it would have been said, absorption of matter into the constitution. Some of the old surgeons used to put sponge to the mouth of wounds, to absorb the matter, and prevent its being carried into the constitution; but, Gentlemen, it appears to have no power on the constitution. There is no doubt, certainly, that the inoculation of putrid matter will, as we often see, sometimes prove fatal. The proofs that the absorption of common matter into the constitution does not produce fever, are—1. It is not during the formation of matter that the fever comes on; for never till after the abscesses have broken, is the patient attacked with it. Certainly, the formation of matter will be attended with a slight fever, but not of the hectic kind: the tongue will be clean, the pulse very little affected, and the person very slightly deranged; but after an opening is made into the part, constitutional irritation sometimes comes on, and life is then endangered.

2. The degree of hectic fever is not at all proportionate to the size of the surface on which the matter is formed. Look, for instance, at a large wound on the leg: the person will be going about with it, and feel little or no inconvenience; whilst a sore on the lungs of the size of a crown produces hectic fever of the most violent kind. On one part, it is very considerable; on another, it is very slight.

3. Hectic fever comes on when no matter has formed. A woman who had her leg amputated, came into the Hospital for a pain in the knee on the same side; the symptoms of constitutional irritation were so severe, that in consequence Mr. Chandler held a consultation. The knee-joint was a little enlarged, and violent pain in the part, with great constitutional disturbance existed. Amputation was now performed above the joint, and after the operation I had an opportunity of examining the limb. There was no formation of matter in the knee; in the condyles, however, of the thigh bone the ulcerative process had commenced, and the hectic fever was the effect, in this case, not of a disease of the knee-joint, but of the cancellated structure of the thigh-bone. In those cases also where matter has been absorbed, no hectic fever has come on. Some

years ago, my old friend Mr. Cline thought that psoas abscesses might be cured by causing the absorption of the matter. From the case of Dr. Saunders, which occurred at that time, he tried the effect of digitalis on a boy of sixteen years old, who had a psoas abscess; the size of the tumour diminished, the skin became flaccid; but as soon as the digitalis was left off, the matter returned again, and during the trial of the medicines the pulse was lessened, and the boy a little weakened—symptoms which, as you well know, are produced by digitalis. But during this time, no hectic fever came on; therefore, the belief of the absorption of matter being the cause of hectic fever is unfounded.

The last circumstance that I shall mention, is the influence which the admission of air into cavities has in producing local irritation. Now, from what I stated concerning the absorption of matter into the constitution, I think you will have agreed with me: whether you have or not I do not care; it is my duty to state to you my opinion—you must think for yourselves; only do not rest contented with thinking: make observations and experiments; for without them your thinking will not be of much use. The circumstance, however, about the admission of air into abscesses when they are opened not producing local irritation, will be less readily understood. When an opening is made into an abscess, very little irritation supervenes till the third day; I say the third day, because it is not till then that constitutional disturbance takes place. If asked whether air has any influence in producing local irritation, you may answer, yes; but I say that it is not the case. Old surgeons, in their opinion on this subject, maintained that it was the admission of air which produced the local irritation attending the opening of abscesses, and endeavoured to cure hydrocele by inflating it after the evacuation of the water. But what was the consequence? when the air became absorbed, the adhesive inflammation did not take place, and the hydrocele returned.

Again, experiments have been made on animals; air has been blown into the cellular membrane of a dog; nothing but a temporary stiffness from the distension of the skin takes place, and when the air is absorbed, the crackling goes off without the adhesive inflammation. Dr. Haighton mad

an ingenious experiment some years ago: he inflated the abdomen of a dog from an opening in the tunica vaginalis; and this mode of doing it evinced his knowledge; for in the dog and many other animals, there is a communication with the abdomen from under the tunica vaginalis. The dog was let loose; he was stiff for a few days, but when the air was absorbed he became quite well.

I know a curious circumstance which took place at the depôt at Norwich; it was at the time when persons were drawn to serve in the army. A man, unwilling to become a soldier, came to the surgeon, and said that he had a large rupture, which disabled him; he showed it, and the surgeon sent him away. This man had made a puncture just above the pubis, and inflated it with a brass blow-pipe; the man himself mentioned it to a surgeon at Yarmouth as a joke. What takes place when air is admitted into the cavity of the chest? An air cell gives way, the wind goes into the cellular tissue, the face and body become bloated up, but is afterwards removed by absorption, without producing any inflammation; thus a person who holds that the admission of air into cavities produces the irritation attending the opening of abscesses, takes a narrow and partial view of the case.

After the Lecture, the stomach of a dog which died of hydrophobia was exhibited to the class. The œsophagus was inflamed, and the internal surface itself very red; there were also deposits of coagulated blood between the mucous and muscular coats, an appearance which, Sir Astley said, had always been observed in dogs that had died of this complaint. The animal had unfortunately bitten four persons, who were under medical treatment.

LONDON PHARMACOPŒIA

One of the numbers of the *Medical Repository* for this year contains some critical remarks on the *London Pharmacopœia* of 1809, and the altered edition of 1815, *&c.*, written by Mr. Sprague.

The writer, previously to considering the Pharmacopœia, suggests the propriety of the London College taking into consideration the present weights used by the apothecary, and for this purpose recommends to its attention some observations, to be found on the subject, in Mr. Gray's *Elements of Pharmacy*. The fact is, that apothecaries buy their drugs and sell them by avoirdupoise weight; but those they dispense, *i. e.* prescribe, or prepare according to prescription, are required to

be weighed by apothecaries' weight; and thus the same individual is obliged to use two different kinds of weights in cases where one would have answered all that could be wished for. But it happens that medicines above a qr. oz. are not in all cases dispensed, as is generally supposed, by apothecaries' weight; and this arises from there scarcely ever being a larger weight than the quarter of an ounce (two drams) given with the scale and weights used by apothecaries. When medicines, therefore, are ordered in quantities less than a quarter of an ounce, they are prepared by apothecaries' weight; when above that quantity, by avoirdupoise. The confusion likely to result from this complication is of a very serious nature. The use of weights and measures is to determine certain quantities, and in proportion as they are intelligible, so will they be useful; for this reason it is desirable that a fixed system of weights and measures should (if practicable) be established all over the world; but it is of the utmost importance that in the dispensing of medicines no ambiguity should exist as to the quantities meant by certain signs, for on a correct knowledge of them will in many cases depend the lives of individuals.

The writer then proceeds to the consideration of some of the various articles and preparations of the London Pharmacopœia. The defects of the College Pharmacopœia may be ranked under three great heads:—1st. It takes no notice whatever of several medicines, the usefulness of which has been ascertained beyond the least shadow of a doubt;—2d. No officinal preparations of a great number of articles already in the Pharmacopœia have ever been given by it;—And 3d. The chemical compositions of many of those that are given are far from being correct.

The first of these defects will always exist to a greater or less degree in every one of the College Pharmacopœias; it must be recollected, that several years elapse between the appearance of each, and therefore it is more than probable that a variety of medicines will be discovered in the intervals. In an age like the present, when such a host of new remedies is continually presented to the notice of the public, we are aware that caution must be exercised before they receive a place in the Pharmacopœia; but let the College examine into their merits, and, superadding the result of their own observations to that of other individuals, let them decide accordingly. There appears, however, to be, on the part of the College, a greater disposition to keep in their Pharmacopœia medicines which are totally inefficient, than to give place to new remedies, which the observation and experience of individuals out of their body prove to be valuable.

Mr. Sprague has given a list of nine substances, with a short notice of their qualities, accompanying which, we find the cubebs, iodine, croton oil, &c. We hope in the next edition this ground of complaint will at least be removed.

2dly. That there should be no officinal preparations of medicines which the College has recognised, is rather surprising. By officinal preparations are meant those forms of medicine which, from their nature, are capable of being kept in the shop for any indefinite period; among these are tinctures, confections, masses of pills, &c., from which at any time extemporaneous formulæ can be prepared. A Pharmacopœia is a book of reference, and a person, in referring to any particular medicine enumerated in it, looks in order to know what preparations of it may with safety be used; this, however, the College has not thought fit in many cases to make known, for what reason we are at a loss to conceive.

The third defect, viz., the inaccuracy of several of the officinal preparations and compositions, is the most serious evil: the rapid advances that have, of late years, been made in the science of chemistry, have made us so much better acquainted with the substances used in medicine, that the chemical composition of many of the preparations formerly thought to be accurate, is found to be quite the reverse, and the nomenclature of many of the preparations to be incorrect. This part of the subject the writer has illustrated by an analysis of several of the preparations contained in the Pharmacopœia, and in those which are chemically incorrect suggests such alterations as will obviate all the evil now complained of: take, for instance, the liquor ferri alkalini (solution of alkaline iron), which, independent of the absurdity of its name, can never be exhibited without decomposition; as a substitute for this preparation, the writer gives a formula for preparing the liquor ferri oxygenati (solution of oxygenated iron,) which forms an elegant and valuable chalybeate. Again, those medicines which derive their names from the substances which they contain, and the composition of which substances is now known, by the aid of recent analysis, to be different from what they were formerly supposed, are consequently now called by names which at present are quite absurd; thus, since chlorine has been ascertained to be the base of muriatic acid, all those substances, now called muriates, ought to be called chlorates; therefore the name of hydrargyri oxymurias (oxymuriate of mercury) is at present improper, and should be changed for *deuto-chloride* of mercury, which most judiciously designates its chemical character. These and various other useful alterations, the writer in this article throws

out for the consideration of the College.

That a body with such high pretensions as those to which the College lays claim, should be tardy, and even unwilling, to correct any errors which may happen to exist in its Pharmacopœia, must very much tend to lessen the respect and dignity it wishes the profession to entertain for it. Particularly as every one may see that private individuals, one after another, in rapid succession, have long ago pointed out mistakes which the College have left uncorrected, nay, even unacknowledged. When we consider that the College of Physicians is a corporate body, and that the motives which operate on private individuals act with comparatively little force on such bodies, we shall have no difficulty in accounting for the extreme reluctance the College feels in correcting any mistakes which it may have committed.

ACUPUNCTURATION.

Much has lately been said of the efficacy of this remedy in various affections; and well-marked cases, in which it has been decidedly beneficial, have been published to the world. In rheumatism, trismus, and anasarca, it has been tried, and with success. The facility with which it may be used, leads us to hope that this remedy may meet with a trial from many intelligent practitioners, who may give to the profession the fair and important result of their observations. Acupuncturation is a remedy of very ancient date. In the *Philosophical Transactions* for 1683, is a notice of a book written by Dr. Ryne, in which an account is given of the pathology of gout, and the various means that the Japanese made use of at that time in the treatment of their complaints, among which is Acupuncturation.

It may not be uninteresting to our readers, to give an account of the various affections in which they employed it, a description of the instrument, and the mode of using it.

"The needle is made long, slender, sharp, of gold, or at least silver, with a wreathed handle.

"It is to be conveyed either by the hand or a little mallet into the part gently, a finger's breadth or more, as the case requires, and to be held there the space of thirty breathings, (if the patient can bear it,) otherwise repeated punctures are rather used. The puncture must be when the party is fasting; deeper in a great than less disease; in old than young men; in grown persons, than in those that are lean and slender; in fleshy parts, than in nervous. The needle is chiefly used in diseases of the head and lower belly, and is applied to the head in head-aches, lethargies, convulsions, epilepsy, diseases of the eye, &c. The womb itself may be perforated, *(the Japanese affirm,)* and the fœtus wounded, when its mo-

tions are enormous, and threaten abortion. In these cases, the needle must be applied whence the distemper arises: to the stronger on the back, to the weaker on the abdomen. When the pulse is scarcely perceived, the puncture must be made in the arms, a little beside the veins. The chirurgeons keep by them images, wherein all the places in the body proper for the needle are designed by marks. The author himself was an eye-witness of the use of this puncture on a soldier, who, being afflicted with violent disorders of stomach and frequent vomitings at sea, suddenly relieved himself by pricking a thumb's-breadth deep into four different places about the region of his *pilorus*."

A Case of Bronchocele. By H. Shuckburgh Roots, M. D., Physician to the Carey Street Public Dispensary, and to the St. Pancras Infirmary.—*Read, Dec.* 10, 1822.

[From the Medico-Chirurgical Transactions.]

I am induced to offer the following case to the notice of the Medical and Chirurgical Society, in the hope that it may not prove altogether unworthy of their attention, illustrating, as it does, the advantage to be obtained from the use of iodine, as a remedy in the cure of Bronchocele.

In the summer of the year 1820, being resident during a few weeks in the country, I was consulted by the friends of a young lady, relative to a tumour in her neck, of which the following are the particulars:—

Miss ——, ætat. 19, tall of stature, with light blue eyes, fair hair, and transparent skin, and inheriting from her father a disposition to scrofula, has had for the last two years an enlargement of the thyroid gland, which, within the last three or four months, has increased considerably, and at times occasions her a good deal of uneasiness, particularly when bending the chin towards the sternum, or in singing, and laughing, or upon using any considerable exertion. Both lobes of the gland are enlarged, the left rather more than the right, and, upon the whole, the size of the tumour may be compared to that of a moderate-sized orange, flattened.

I directed eight leeches to be applied to the tumour twice a week, and prescribed fifteen grains of the carbonate of soda to be taken three times a day. My patient persisted in the application of the leeches, and in the use of the soda for three months, without any material alteration in the size of the tumour. At this time I again saw her, and finding her unwilling to persevere in so frequent a use of the leeches, I directed her to take a drachm of the burnt sponge three times a day, and to apply the leeches once in a fortnight. This she adhered to also for about three months, and, upon my visiting her at that period,

I found the tumour exactly the same in size as when I first saw it. Wishing then to try the effect of friction, I ordered her some of the linimentum saponis, and directed a small quantity to be rubbed gently into the tumour for a quarter of an hour at each time, night and morning, and at the same time to continue the use of the burnt sponge. This plan she readily submitted to, and it was steadily adopted for three or four months, but without at all diminishing the size of the tumour.

My patient now began to be tired of attempting any remedy, and I advised her to do nothing more than once in three or four weeks apply eight or ten leeches, hinting at the same time, that if it should at any time show a disposition to increase materially, she might have recourse to the passing of a seton through the tumour, as recommended by Dr. Quadri; though, under the present circumstances of her case, I did not feel myself warranted in advising her then to undergo the operation.

Having been present at a meeting of this society last winter, when Dr. Roget read a letter from Dr. Coindet relative to the cure of some cases of Bronchocele by the use of iodine, I determined to try it on the above patient; and in the latter part of the month of January of the present year, the tumour being somewhat increased in size, she began the use of it in the following proportions: — Potassæ Hydriodat. gr. xxxiv. Ceræ albæ ʒij. Adipis Suillæ ʒiss M. the size of a garden bean, to be rubbed into the tumour night and morning, for ten minutes at each time.

She continued the use of ointment for five weeks, during which time no pain had been produced in the tumour by its application, and at this time I visited her, and, upon measuring her neck, (I having measured it accurately, prior to the use of the iodine,) I found it had diminished in its circumference three-quarters of an inch. I then ordered her to persevere in the use of the ointment, increasing the proportion of iodine from thirty-four to forty-four grains, and directed her to abstain from its use, in case any inflammation should arise in the tumour. After using this ointment four or five times, the tumour became tense and painful, and the integuments inflamed; the use of the ointment was accordingly omitted, eight leeches were applied to the tumour, and a dose of the sulphate of magnesia was given to her: the inflammation was speedily abated, and in a week she resumed the use of the ointment; and, as no pain was again produced, during its use, for several weeks, I again increased the proportion of iodine to fifty grains, in which proportion she continued to use it, without any pain, until the latter part of July, when I had the satisfaction of finding,

that the tumour on the left side had entirely disappeared, whilst that on the right side was also very materially lessened.

Wishing then to try the internal exhibition of the medicine in conjunction with the external, I directed her to continue the use of the ointment, increasing the proportion of iodine to fifty-six grains, and also to take twenty drops of the tincture of iodine three times a day, in a glass of water. As my patient resided some miles from London, I was prevented from seeing her again until the first of the present month, when I had the pleasure of finding her perfectly well, the tumour on both sides having entirely disappeared. She was unable to take the iodine internally so often as three times a day, in consequence of its having produced sickness and pain in the stomach and intestines; but she had continued to take it twice a day for about six weeks, and had taken it then once a day until I saw her, although she had discontinued the use of the ointment for more than a month, as the swelling had entirely subsided.

I am well aware that too much stress ought not to be laid on the successful issue of a solitary case; but as it is confirmatory of others similarly and successfully treated, I cannot but consider that iodine is a most valuable remedy in a disease where so many different remedies have been tried, and found useless, particularly as I have at this time a patient under my care suffering from a considerable Bronchocele, but which has very materially diminished under the use of this medicine, the result of which case I shall, at some future period, have the honour of relating to the Society.

Grenville-street, Brunswick-square, Dec. 3, 1822.

GUY'S HOSPITAL.

Nov. 7, 1823.

During this week several accidents have been brought into this Hospital, among which were a fractured tibia and fibula, fractured patella, and an injury to the left hand of a lad who was obliged to have the little finger and its metacarpal bone removed, as well as the middle and ring fingers, together with part of their metacarpal bones, and the first joint of the index finger. The two last accidents are doing well; but the patient with the fractured leg has, since his admission, been obliged to have his water drawn off, and to-day his pulse was irregular; full; 78; thirsty; tongue-furred; pain, on pressure, in the epigastric region; bowels had not been open since the accident happened, which was on Wednesday last, Nov. 4. Is allowed animal food; keeps his leg (which is placed in an extended position, with lateral splints) wet with spirit wash; has taken no medicine.

Operation.—At two o'clock this afternoon, Friday, Nov. 7, a man, J. M., aged 55 years, who had suffered from gravel for two years, underwent the operation for stone, which was performed by Sir A. Cooper, who removed a calculus of rather small size from the bladder. In the evening after the operation, he was very easy, and going on well.

MIDDLESEX HOSPITAL.

Case of strangulated Hernia.
M. N., a Blacksmith, aged 47.

THIS man was brought into the Hospital about twelve o'clock on Friday night, Oct. 3, 1823. The account he gives of himself is, that he has had a rupture for several years past, but until now he could always replace it himself.

Had worn a truss, in consequence of which the rupture had not come down for the last six months, until about three o'clock on the day above mentioned. Was not exerting himself particularly at the time, but on the previous day had been hard at work.

A surgeon saw him about eight o'clock the same evening; he bled him largely, and attempted to reduce the Hernia, but without success. He was then brought into the Hospital, and the House Surgeon immediately made an attempt to reduce it; but failing, he placed the patient in the warm bath, and again attempted the reduction by compression of the tumour for the space of half an hour. This also failing, a note was sent early the next morning, Oct. 4, to Mr. C. Bell, the surgeon of the week. By this time the symptoms had become more pressing, the pain in the tumour had considerably increased, with tension of the belly, and frequent vomiting. It had, at this time, the appearance of a Scrotal Hernia. The scrotum on the right side was occupied by a tumour, the neck of which extended upwards, and outwards in the course of the spermatic passage, and in a direction towards the superior spinous process of the ilium.

Cathartic clysters were ordered.

Compound extract of colocynth one drachm and a half, soft soap one ounce, boiling water twenty-four ounces, a clyster.

The surgeons having failed in reducing the tumour by that degree of continual pressure which they conceived to be safe, resolved on the operation.

The pubes being shaved, and every thing in readiness, the operation was performed about one o'clock.

An incision of a semicircular form was made *obliquely* across the neck of the tumour, and not as *usually* recommended in the length of the tumour.

This flap was dissected up towards the belly, with the forceps and scalpel. In this incision, the pudica externa

was divided, which gave out its blood so freely as to require to be taken up.

The facia superficialis was divided, and also those fibres which descend frem the pillar of the ring.

As the incisions became deeper, the director was used. This instrument being pushed firmly under the layers of membrane, the probe-pointed bistoury was run along it. In this manner the proper peritoneal sac was exposed. It was opened by pinching it up with the forceps, and carrying the edge of the scalpel horizontally. The moment it was opened, there flowed out an unusual quantity of dark-coloured serum. The quantity of this fluid was so great as to distend the scrotum, and to give the Hernia the appearance of a Scrotal Hernia, which, in fact, was only inguinal, inasmuch as the intestine did not descend further than the groin. The directory was introduced into the small hole made in the sac, which, with the probe-pointed bistoury, was opened so as to expose the intestine. The intestine was dark-coloured, thick, and fleshy. An attempt being made to introduce the finger within the neck of the sac, it could now be discovered that the intestine was firmly embraced, and, in fact, strangulated. The directory was passed between the intestine and the neck of the sac, and with a bistoury of a particular form the stricture was cut in a direction directly upwards.

The intestine was then reduced; the incision brought together by adhesive straps, and supported by a compress and a double-headed roller.

Extract of colocynth five grains, submuriate of mercury one grain. To be made into a pill, to be taken every fourth hour until it operates.

Evening.—Has had a copious alvine evacution.

Sunday Morning, Oct. 5.—Some tension of belly, and pain in neighbourhood of the wound.

Twenty leeches to the lower part of the abdomen. Acetated solution of ammonia, half an ounce; distilled water, one ounce and a half; to be taken every four hours.

In the evening his pulse was 88. There was considerable tumefaction over the wound, on which account the dressings were newly adjusted.

Castor oil half an ounce, tincture of opium eight drops, one ounce and a half camphor mixture; to be taken immediately, and every third hour.

Oct. 6.—This morning he had copious stools; belly soft; pulse 92; skin natural.

7.—Continues to do well; the scrotum indicates, by its appearance, as if the intestine had descended to the bottom; but on feeling the tumour more carefully, it has that sort of hardness which indicates an inflammatory swelling of the peritoneal sac; exactly such a swelling as would have been the consequence of an opera-

tion for hydrocele, by incision; adhesion by the first intention has taken place in the wound.

8, 9, 10, 11.—No particular alteration.

12.—Pulse very soft, 80; free from pain; stools natural; tongue clean; appetite improving. The adhesion, which for several days appeared complete in the wound, has suppurated; it is perfect, however, so far as it regards the opening in the abdomen, but the fluid from the lower part of the sac escapes by the wound; the swelling of the scrotum has much diminished, but there is a small prominent point, where suppuration has taken place in the scrotum.

17.—Suppuration in the scrotum burst; going on very favourably; full diet. After this time continued to improve. Nothing material has since occurred.

Tuesday, Nov. 4.—He is about to be discharged; quite well; general good health.

LECTURE XI.

GRANULATION.

I HAVE endeavoured to describe to you the first mode in which the union of wounds and the mode of filling up cavities is effected, namely, by the process of adhesion. I shall now proceed to consider the other mode of union between divided parts of the body, namely, GRANULATION; thus the two processes which nature institutes for the purpose of filling up the cavities of the body for the cure of wounds are adhesion and granulation. If you are asked for a definition of the term granulation, you will say that a granulation is a newly-formed part, generally red in colour, and having the power of secreting pus. The mode in which granulation is produced is as follows:—and you will find it very similar to adhesion, but differing from that process in one respect. When an abscess has been opened, or when a wound has been produced, if the abscess be not immediately closed, or if the edges of the wound have not been brought together, inflammation is excited, and this inflammation occasions an effusion of the fibrin of the blood upon the surface of the wound. This fibrin is poured out in a layer which covers the surface of the wound. The layer of fibrin soon becomes vascular, for blood-vessels, which are elongations of the vasa vasorum of the divided vessels, are forced by the action of the heart into the fibrin which has been deposited, and this layer consequently becomes vascu-

lar. The difference between the mode of union by adhesion and by granulation, is, that in the latter the vessels shoot to the surface of the layer which has been thrown out, terminating by open mouths on the surface of the newly-formed substance, and secreting pus, at the same time that a layer of lymph, or fibrin, as it is more correctly termed, is effused. The fibrin which is poured out, besides this purulent secretion from the vessels, forms a second layer, into which the vessels shoot as before. The vessels supporting the first layer are the means of supporting the second layer, where the vessels terminate as before by open mouths on the surface of the substance effused. In this manner layer after layer is formed until the cavity becomes filled.

The characters by which granulations are distinguished are these: their surfaces are uneven; they are generally red in colour, and they secrete matter. I know not whether you have followed me or not, but this process may be easily explained. Suppose we open an abscess; the result is that adhesive inflammation is produced in the internal surface of the cavity. A layer of adhesive matter is in this way thrown out, and if the sides of the abscess are brought together by passing a roller round it, we may often prevent the future formation of matter, as I have before had occasion to explain to you. But if the union by adhesion does not take place, then granulations are formed in the following manner:—When fibrin is poured out, the vessels shoot up to its surface, permeate the newly-formed substance, and terminate by open mouths on the surface of the layer. This layer becomes the means of filling up a portion of the cavity; it is soon succeeded by another; the vessels become elongated, effuse matter on the surface, and shoot up as before to the second layer of fibrin. In this manner one layer after another is formed, until the cavity of the wound is entirely filled. The vessels shooting into granulations are very numerous; they are principally arteries. If you inject an ulcer of the leg, the great degree of vascularity in the granulating surfaces is accounted for by the number of vessels divided into radiated branches, which we see entering the granulations, and producing the arborescent appearance which is observed in them. In examining the struc-

ture of granulations, they appear to become vascular in the following manner:—An artery enters at the base of the granulation, and is then divided into radiated branches; from these vessels pus is secreted, and an incrustation is formed, producing a layer of adhesive matter on the surface of the granulations. This is a little difficult to conceive; it is a circumstance which, I believe, has never been observed, and which I learnt in the following manner: I took a portion of injected ulcer from the arm, and threw it into alcohol, in order to observe its vascularity. After it was thrown into the alcohol it was so opaque on the surface that no blood vessels could be seen. It is the fibrous matter, therefore, covering the surface of the granulations which receives the blood vessels. In this view a granulation may be considered as a gland, and the surface of an ulcer merely as a glandular surface. Now a gland is a part of the body in which a secretion from the extremities of the arteries takes place, and the blood, which is not employed in the secretion, is returned to the heart by means of the veins that accompany the arteries. So in granulations, the arteries throw a quantity of blood near the surface of the wound, and there secrete pus.—There is a vein accompanying each artery, and the fluid conveyed by the vessels is partly converted into pus on the surface of the ulcer, and partly returned back to the heart.

Granulations are not good absorbent surfaces in ulcers recently formed; but if the ulcers have existed for any length of time, the absorbent vessels readily take into the system any substance which may be applied to them. In this way we frequently see persons salivated by the use of injections of the oxymuriate of mercury. It is not an uncommon practice to inject a solution of a grain or two grains of oxymuriate of mercury into sinuses, for the purpose of stimulating the vessels If the sinus has existed for a considerable time, the oxymuriate of mercury is frequently absorbed, and the mouth becomes affected in the same manner as if the mercury had been absorbed into the system by rubbing it into the skin, or taking it into the stomach. This proves that old granulating surfaces have the power of taking in, by absorption, a fluid of this description. I have known what is commonly call-

ed the black wash, which is composed of the liquor calcis and the submuriate of mercury, when applied to the surface of ulcers, produce an effect upon the mouth in persons who are easily affected by mercury. I believe that the wash of the liquor calcis and calomel often produces good effects in the cure of sores, by the mercurial action which it excites in the system, and not merely by its local effects on the sore to which it is applied. Ulcers are, however, frequently the means of producing baneful effects upon the constitution, by the readiness with which they absorb any substances which are applied to them. Thus, arsenic applied to the surfaces of sores is very frequently absorbed into the system; and on this account, arsenic is to be regarded as a very dangerous external remedy. With respect to the use of arsenic as an internal remedy, it ought never to be employed without extreme caution, and unless the patient is watched from day to day.

Case.

I remember a case in the other Hospital, of a patient, who was brought in with a fungus of the eye, and who was under the care of Mr. Lucas, a man of great skill in his profession, and the father of the present Surgeon of that name. Mr. Lucas ordered a solution of arsenic to be applied to the part. After it had been used for three days, the man complained of pain in the stomach, but this was not supposed to arise from the use of the solution. The application was continued; the pain in the stomach became excessive; convulsive tremors of the muscles succeeded; and the patient died. I was quite sure that he died from the influence of arsenic in the system; and, upon examination of the body after death, I found the stomach in the highest degree inflamed, and exhibiting the peculiar appearance which is produced by arsenic, and not by poisons generally. I believe, therefore, that this person died from the application of the arsenical solution. Quacks are in the habit of destroying tumours of the breast by the use of arsenic. Women are sometimes, though very rarely, foolish (*a laugh*;) and they will undergo any torture which is not inflicted by a knife, rather than submit to an operation that would not give them a tenth part of the pain which they suffer from such

applications. They go to a person who tells them of the number of cures he has performed by means of a specific used for the purpose of destroying schirrous affections; and, indeed, these Quacks very frequently destroy the schirrous part, and the patient too. Mr. Pollard, a surgeon, told me, the other day, of a person in town, who applied an arsenical preparation for a schirrous affection of the breast, in consequence of which the patient died in less than a week. I had myself occasion lately to perform an operation for a schirrous breast, to which arsenic had been applied. I asked the woman which gave her most pain, the application of the arsenical preparation, or the operation. She replied that the pain of the operation was not so great as that of the application, and that the arsenic had been applied ten or eleven times. The consequence of these applications is that they become absorbed into the system, and produce derangement of the stomach, the intestinal canal, and the nervous system, and sometimes paralysis.

While I am on this subject, I will mention a case to you which occurred in this town, and which I should have scarcely believed, if it had not come within my own knowledge. A person in this metropolis happened to have *bow* shins. It was a part of his duties to teach ladies to draw and paint, and in the prosecution of this branch of his profession, he found his *bow* shins, as he himself declared to me, a very great evil. (*A laugh.*) He felt that his merits were less fairly appreciated, and his instructions less kindly received, by reason of the convexity of his shins; he was persuaded, in short, that his *bow* shins stood between him and his preferment. Under this impression, he went to a very noted person in this town, and showing him his bone (*a laugh,*) said to him, "Pray, Sir, do you think you can make my legs straight?" "Sir," said the Doctor, "I think I can; if you will take a lodging in my neighbourhood, I think I can scrape down your shins, and make them as straight as any man's." A lodging was taken; the father of the patient assisted in the operation, and all three of them—the father, the son, and the doctor—took a turn in scraping down the convex shins. A great deal of rasping was required; an incision of very considerable extent

was made in the shin, the integument was turned aside, and an instrument which was at that time contained in the surgeon's case, called a rougee, was employed to scrape the shin-bone. When the doctor was tired of rasping, the father took a spell, and the patient, in his turn, relieved his father. At last the shell of the bone became so thin, that the doctor said they must proceed no further with that leg. The other leg was then rasped in a similar manner, and thus large wounds were produced in both of the shin bones. The surfaces granulated very kindly, and very little exfoliation of the bones took place; but unluckily the granulations *would* form bone, so that up jumped the bones of the shin again. (*Much laughter.*) The Doctor, however, was resolved not to be defeated, and accordingly put a layer of arsenic over the whole surface. It was in consequence of the effects of this application that I saw the patient. The arsenic was absorbed into the system, and he became paralytic in his arms and lower extremities. A great number of exfoliations took place in his legs; and he showed me a large box, in which the exfoliated portions of bone were contained. I recommended him to go into the country, and he went to Bath, where he staid for some time, and got rid of his paralysis. This case made a good deal of noise in town; and there were some surgeons who expressed a strong wish to prosecute the doctor. I recommended them, however, not to take any steps until I had seen the patient himself; and when he next came to me, I asked him whether he thought his legs improved, and whether he would again undergo the same operation, at a similar hazard of his life, to have his legs made a little straighter? He replied that he would (*a laugh;*) and under these circumstances I was of opinion that, as the young man was content, it was a folly to think of prosecuting the doctor. The patient, in this case, appeared to be as great a fool as the doctor whom he consulted, and deserved to be punished for his folly. I have no wish to injure individuals; and I shall not, therefore, mention the name of the operator. Some time has elapsed since the case occurred, and the transaction is now almost buried in oblivion. One of the parties is since dead; not the person, however, who underwent the operation, for he

still lives, and is proud of his improved legs.

Opium, when applied to the surfaces of sores, is very readily absorbed into the system. I believe that it is often a very useful application to the surfaces of sores. I mentioned, on another occasion, a case in which a tetanic affection was produced in a child, whose leg had been amputated by Mr. Lucas, the present surgeon of Guy's, and where the application of opium to the stump gave more immediate relief than I ever remember to have witnessed. It relieved the spasms, and, as I believe, saved the child. If opium, applied to the surface of sores, be absorbed into the system, it produces excessive costiveness, extreme pain in the head, and torpor of the system, which is only to be removed by the frequent administration of active purgatives. The effects on the constitution, when absorbed from the surface of sores, are very much the same as when it is introduced into the stomach.

Granulations possess nerves as well as arteries, veins, and absorbent vessels. Granulations are sometimes extremely sensitive; but this is far from being the case in all granulations. We shudder at seeing a person handle a sore roughly, supposing that it must give the patient extreme pain. Granulations which spring from parts endued with great sensibility, such as muscles, are indeed extremely sensitive; but many granulations, such, for instance, as arise from bones, have no sensibility whatever. If ulceration be produced to a considerable extent in an exposed bone of the head, a probe may be put into it, while the patient is quite insensible of your touching his head. If you do this in the granulations arising from bones, and ask the patient whether you have touched him, he will say, 'No;' but if you apply the probe to the edge, or near the edge of the wound, he will feel it. Granulations, therefore, springing from bone in an uninflamed state of the bone, are not sensitive. — Granulations, however, which spring from the cancellated structure of the bone, are, sometimes, extremely sensitive. I have, at present, a patient who had a compound fracture of the leg: the fracture was attended with abscess, and a small exfoliation of the bone took place. In this case, when a probe was put down into the cavity, the granulations from the cancellated structure of the bone were extremely sensitive. When the

inflammation passes away, the sensibility of the part is diminished. The same thing happens with respect to granulations springing from tendons, (as the tendo achillis, for instance,) which are entirely insensible. So granulations arising from fascia and the aponeurosis of muscles, are endued with little sensibility. In general, therefore, although granulations springing from parts of great sensibility are sometimes exquisitely sensitive, those arising from parts in a great degree insensible, or entirely so, as tendons, are not sensitive; a circumstance which you cannot at any time go round a large hospital without having an opportunity of witnessing.

Granulations are very readily united to each other. The mode in which union is effected, is, by bring the edges of the two granulating surfaces together, so as to produce the adhesive process. The surface of the granulations will be covered by adhesive matter, and you have only to apply the two surfaces to each other to produce an union. The knowledge of this principle is very often useful in the practice of surgery. A man has a considerable portion of the scalp raised from the skull, and the pericranium throws out granulations, whilst the raised portion of scalp is also granulating. Instead of waiting for the tedious process of the union of both surfaces, by granulations filling the cavity, you have only to place one portion of the granulations upon the other, bind them well down with adhesive plaster, and they will be sure to inosculate. In this manner, a surface, which it would otherwise have taken a long time to close, will be healed in a few days. The cavity of the scrotum, after removal of the testicles, is often covered with a great number of granulations, by bringing the surfaces of which together with adhesive plaster, a wound, which would otherwise require weeks in healing, will be healed in a very short time. It was upon this principle, namely, that of bringing together the granulating surfaces, that Mr. Baynton proceeded with so much success in the treatment of ulcers; so that our hospitals are now much less filled than they formerly were with those opprobria of our art.

The next subject to which I shall direct your attention is the closing of sores by

Cicatrization.

The formation of the new

skin with which a sore is covered over is called Cicatrization, which is produced in the following manner. The vessels at the edge of the skin form granulations, and these granulations unite with the granulations of the surface of the sore. The granulations produced from the edge proceed towards the centre, and those on the edge inosculate with those on the surface of the sore, and are united by the adhesive process. The vessels become elongated from the edge of the sore, and proceed in radii from the circumference to the centre. Day after day an addition is thus made to the cicatrix, until at last the vessels reach the centre from every part of the circumference; when the process of cicatrization is completed. It may be said by some persons, that this is not the only mode which nature takes for the formation of new skin, for that it often happens that the process of cicatrization commences from the centre of the sore. If these persons mean to say that insulated portions of skin are sometimes seen in the centre of a sore, having no communication with its edges, there can be no doubt of this fact. But how does this happen? It is not that the centre of the sore has the power of forming new skin, but the new skin in the centre is produced in consequence of the whole of the skin not having been ulcerated away, and granulations arising from the part of the skin which was left. This only happens in irregularly-formed sores, where the healing process has gone on to the centre, and then the sore has broken out in the circumference. If granulations arise from any portion of skin in the centre, these granulations produce new skin, and an insulated portion of skin is produced, forming a part of the cicatrix, which is not afterwards ulcerated away.

When a cicatrix is formed, in the first instance it is extremely vascular; but when it has existed for any length of time, the blood-vessels become contracted, and it is whiter than the original skin. Hence the white appearance of the cicatrices after small-pox; for, although they are more vascular than the original skin, when first formed, in a little time they lose this vascularity, and are endued with less living power than the surrounding parts.

The readiness with which the surface of a sore is covered

'n by cicatrization, depends very much on its form. A sore of a circular form requires a very considerable time before it will heal; whereas a sore of much greater length, but of less diameter, will heal more quickly. You may always pronounce, therefore, that a round sore will be longer in healing than a longitudinal one, *cæteris paribus*, as for example, in the same patient, where the constitution is the same. The reason is, that the vessels have to elongate much less from the edge to the centre in a longitudinal than in a circular sore. The form, therefore, has an influence on the readiness with which cicatrization takes place. Sores are very often difficult to heal from their situation. Thus, if a sore be situated at the back of the leg, there will be often great difficulty in healing it. Indeed such a sore can only be healed by raising the heel, and so loosening the skin, in order to give it a power of being drawn in, to form a new cicatrix. By this means the vessels are more readily elongated, and continually draw the skin nearer the centre of the sore. It appears, then, that the form and situation of the sore have a very considerable influence on the healing power.

Here is a model in plaster, on the table, representing the case of a patient who had been severely burnt, and in which extensive deformity had supervened on the cicatrization of the wounds. The chin had become united to the breast, the arms to the sides, and the upper arm to the fore arm.

Now, in looking at a case like this, some of you might be induced to exclaim, How abominably inattentive must the medical man have been who had the care of this patient, for all these consequences might have been prevented! If you said this, your censure would be culpable; you have no right to say so; for it is a case that might happen to any of you. Deformities of this kind generally arise after the process of healing is completed; they are the effects of the contraction of the cicatrices, and not of the contrac tion of the skin at the time of the accident. Here the skin is contracted so as to pull down the chin, and evert the lip, so that the saliva runs over the surface of the breast, and is constantly excoriating it. All these results proceed, not from the production of the new skin, but from the contraction of the cicatrices after the production. I say this

from having seen, among many other cases of the kind, the case of a child who was a short time since admitted into Guy's. In consequence of the contraction of the cicatrices, the upper arm adhered to the fore arm, and the thumb was drawn back so as to be immoveably joined to the upper arm. (A drawing of this case by Mr. Girome was exhibited to the class.)

Case.

I will mention another case of this kind. Some time ago, a young gentleman, who was playing with fire-works, happened to be slightly burnt in the forehead. His father, who was a very intelligent man, showed considerable anxiety, and expressed his apprehensions at the time, that some horrible deformity would arise from this accident; for he had witnessed instances in which the eye-brows had been drawn up, so that the patient had no power of closing his eyes, from a similar cause. Granulations, however, very soon arose on the surface of the forehead; the sore healed kindly, and the father was delighted to see what he supposed to be the favourable termination of the case. Some time after, however, I saw this gentleman, and, upon inquiring after the child, he told me that he was very well, but that a horrible deformity had ensued from the accident; the eye-brows were drawn up, the eye-lids elevated, and the forehead was quite wrinkled. This took place a few weeks after the healing of the sore, in consequence of the contraction of the cicatrix; and unfortunately this was a deformity incapable of being remedied by any means which art could suggest. I have never seen a case like that represented in the plaster bust on the table, where the chin is united to the breast, which was capable of being cured. You may, by putting a knife behind the bridle and dividing it, separate the chin, to a considerable extent, from the breast; but whatever force you may use for keeping the head back, the contraction will ultimately be the same. There are some parts of the body, however, in which deformities of this kind may be removed; as in cases in which the thigh is united to the abdomen, where the bridle may be divided, and the joint afterwards straightened; but where the bridle is broad, as under the chin, no operation will avail.

In the formation of cicatrices the original parts may all be

reproduced, except two. In the first place, new skin, though differing somewhat in texture and smoothness, is still a substance similar to the original skin. Skin may be defined to be a substance producing rete mucosum and cuticle. Are both produced by the newly-formed skin? Undoubtedly. The cuticle is produced very quickly; and with respect to the rete mucosum, or covering matter of the skin, a little time elapses before it is produced; but it is produced, as the following fact will show:—The new skin of a Negro does not become white, as in that of Europeans, but is at first red, and after a little time turns blacker than the original skin. I was struck with this in the other Hospital, in the case of a Negro, who had been a sailor in a privateer, and had received several wounds in different parts of his body. I observed that the cicatrices were everywhere blacker than the original skin. We may conclude, therefore, that the skin which is reproduced is true skin; that the cuticle is very quickly reproduced, and the rete mucosum after a short period. The cellular membrane is also reproduced, though it has at first the appearance of a solid fibrous mass, which requires some time before it is drawn into the reticular texture, similar to the original membrane. Tendons are very easily reproduced. If the tendo achillis be divided in an animal, it will be reproduced in about a fortnight or three weeks; but it will be somewhat larger than the original tendon. The same thing takes place in the human subject; as you may see from a specimen in our Museum of a tendo achillis which had been reproduced, and which is larger than the original tendon. Every body knows that bones are reproduced; not only the shell of the bone, but the cancellated structure; not only the salt or phosphate of lime, but the cartilaginous substance in which it is deposited. Nerves are also reproduced, but there is some little doubt whether they assist at all in the restoration of sensation by anastomosis. Dr. Haighton made an ingenious experiment with respect to the union of nerves. He divided the par vagum, or eighth pair of nerves, in a dog, on one side, and then let the animal live for some time; he then divided the par vagum on the opposite side, and after suffering both nerves to unite, he then divided them at the same moment, when the animal died.

In *tic douloureux*, after the operation of dividing the nerve, even when the sensibility of the part to which the nerve was distributed is not entirely restored, and although numbness still remains in the cheek, the painful sensation will return.

Case.

An old gentleman, from Bury, in Suffolk, had undergone the operation of the division of the nerve for *tic douloureux* several times. When he came last to me, there was still a little numbness remaining in the lip, yet the pain of the *tic douloureux* was as great as ever. I divided the nerve, but the operation did not afford him the same relief as before. He came again, some months after, and wished the nerve to be again divided. The pain in the part had returned to its former degree, although the numbness of the lip was much greater than before.

The parts of the body which are not reproduced, are—first, muscles. In the case of a man who had a scar in the fore-arm, which appeared to have long existed, I found that, instead of muscular fibre under it, a tendinous structure had formed. A muscle, when divided, unites by tendon, and not by muscle. Secondly, the cartilages of the ribs unite by bone, and not by cartilage.—(Sir ASTLEY exhibited to the class a specimen of cartilage of the human rib, which had been divided, and in which ossific union had taken place.) This, however, will depend in some measure on the age of the person; for in very young subjects cartilaginous union will be produced, but in subjects more advanced in years, the cartilages of the ribs invariably unite by bone.

To the Editor of THE LANCET.

SIR,—Having been a constant reader of your work since its commencement, and feeling convinced of the good effects which such a publication must produce, I have ventured to address you upon a subject deeply interesting to those by whom, from its nature, I presume it is principally supported, viz.—the Faculty. In a former part of your work, I observe a letter signed "Juvenis." The nuisance of which he complains, no one certainly can deny or justify; but the remedy he prescribes, it is plain, would be quite ineffectual. What, for instance, is to prevent the person who writes over his door, "Surgeon, Apothecary, or Medical Practitioner," from adding the word "Authorized"? In fact, I much doubt if many, who could rightly make that addi-

tion, are justly entitled to the distinction.

Of surgery I know nothing, and consequently am unable to form an opinion of any man's pretensions. With the other branches of the profession, however, from the nature of my occupation, I am in constant intercourse; and certainly do, in the course of my experience, meet with some splendid instances of consummate ignorance. The circumstance to which I wish particularly to call your attention, is the frequent occurrence of accidents arising from the improper application or administration of medicines. We all know that an error will sometimes occur, from the common frailty of humanity—it is unavoidable, and in common charity must be forgiven. I am convinced, however, that errors do very frequently occur, from a cause, the forgiveness of which would require the exercise of an uncommon charity—I mean, from the ignorance of the dispenser. No one will wonder at the frequency of these accidents, who is capable of examining the chemical and pharmaceutical knowledge of those engaged in this branch of the profession. The increase within the last few years is enormous, the liability to accidents is of course in the same ratio; and yet I will venture to assert, that there are very few who have an adequate knowledge of chemistry, which is essentially necessary, and very many whose pretensions merely consist in a knowledge of the labels on their bottles. The only remedy that I could suggest for this evil would now be attended with too cruel consequences for present application; and I am only astonished that it has been suffered to continue so long. Another cause which I shall venture to point out, to which these accidents are sometimes attributable, will admit of a very easy remedy; and a slight hint to certain superiors of the profession may probably have the effect, in some measure, of checking its increasing prevalency. It arises from what I shall take leave to call "professional puppyism," viz.—making an ostentatious display of their own acquirements by the use of scientific terms, to the great annoyance and discomfiture of the apothecary and retail druggist, and the imminent risk of their patient's life. I can assure them, that, to the generality of this class of persons, the present nomenclature is almost unknown; and that such names as protoxides, deutoxides, and peroxides, perchlorides and protochlorides, persulphates, subsulphates, and protosulphates, imposing as they may appear, are as unintelligible as though their prescriptions were written in Greek or Hebrew. It will be useless to argue that persons in such situations ought to have knowledge and abilities competent to the duties of their profession;—it is well known they have not. The consequence is obvious; and any

man would rather hazard the detection of an error than acknowledge his own ignorance. With this knowledge, then, the responsibility, if any be incurred, rests with the physician. It is too serious a matter that a person's health, or perhaps life, should be endangered or sacrificed, to gratify vanity and affectation.

Should you think this worthy of insertion, I shall take the liberty of pointing out some other maladies, in which the application of *The Lancet* might be very useful. With my earnest wishes for the success of your undertaking,

I am,
Your obedient Servant,
ANTI-STAHL.

MEDICO-CHIRURGICAL SOCIETY.

At the last meeting of the Medico-Chirurgical Society in Lincoln's Inn (Tuesday, Nov. 11, 1823), after the regular business had been transacted, Dr. Davis, of George-street, Hanover-square, stated, that he felt himself bound to vindicate his reputation from an aspersion which had been unjustly cast on it by Dr. Conquest, the Lecturer on Midwifery. What he alluded to was this:—Dr. Conquest had said, that the views contained in his (Dr. Davis's) paper on phlegmasia dolens, in the last volume of the Transactions of the Society, were not his own.

Dr. Conquest observed in reply, that he had for some time past, long prior to the publication of Dr. Davis's paper, been in the habit of teaching, in his Lectures, that phlegmasia dolens depended on an affection of the vessels of the part similar to that described by Dr. Davis. Here the affair terminated.

For our own part, we think that Dr. Davis claims too exclusively the merit of having ascertained the pathology of phlegmasia dolens; since his paper on that disease did not appear till long after facts, similar to those related by himself, had been published by many French writers. Dr. Davis, however, has not taken that enlarged view of the pathology of phlegmasia dolens which the subject admits of; and in considering the remedies to be employed in this disease, has pointed out nothing new, nor even done any thing to give precision to the use of those already known.

VEGETABLE ALKALIES.

Morphia, or Morphine, the narcotic principle of opium, was first obtained pure by M. Sertürner, about the year 1817.

The simplest process by which it can be extracted from the opium, appears to be that recommended by M. Robiquet, which is as follows: "Three hundred parts of pure opium are to be macerated, during five days, in one thousand parts of common water. To the fil-

tered solution, fifteen parts of perfectly pure magnesia are to be added. Boil this mixture for ten minutes, and separate the sediment by a filter, washing it with cold water, until the water passes off clear. After which, treat it alternately with hot and cold alcohol, as long as the menstruum takes up any colouring matter. The residue is then to be treated with boiling alcohol (22. 32° Beaumé) for a few minutes. The solution, on cooling, will deposit crystals of morphia.

The theory of this process is the following:—Opium contains a meconiate of morphia. The magnesia combines with the meconic acid, and the morphia is displaced.

Morphia acts with great energy on the animal economy. Half a grain, or even a quarter of a grain, dissolved in oil, taken internally, produces very marked narcotic effects; but its power becomes very much increased when the morphia is combined with an acid, as the salts of morphia are more soluble than the morphia itself. The acetate and sulphate of morphine are the salts most commonly used. The acetate is formed, by combining directly in an evaporating dish, acetic acid and morphine, and letting the mixture slowly evaporate to dryness. The sulphate is obtained, by dissolving the morphine in sulphuric acid, previously diluted with water; the solution is then made hot, and afterwards evaporated to dryness.

The acetate of morphia crystallizes in needles, the sulphate in prisms, which dissolve in twice their weight of distilled water. M. Magendie, in his "Formulary for the Preparation and Mode of employing several new Remedies, &c.," just translated by Mr. C. Haden, says, that these salts afford all the advantages which we can hope to find in opium, without having any of its inconveniences. M. Magendie gives the following receipt for preparing the *syrup of morphine*:—

Take of perfectly clarified syrup, one pound; acetate of morphine, four grains; form a syrup. A tea-spoonful is a full dose.

Emetine.

In 1817, a series of chemical and physiological experiments were made by MM. Pelletier and Magendie, from which it was ascertained that its emetic property is owing to a particular immediate principle, named by M. Pelletier *Emetine*.

The mode recommended by M. Magendie for obtaining emetine is the following:—

Powder the ipecacuanha, and digest it in ether at 60 degrees, to dissolve the fatty odorous matter. When the powder yields nothing more to the ether, exhaust it again by means of alcohol—place the alcoholic tincture in a warm bath, and re-dissolve the residue in cold water; macerate it in calcined magnesia, by which means it loses its gallic acid;

redissolve it in alcohol, and evaporate it to dryness.

Pure emetine is white, pulverulent, and unalterable by the air. It has no smell, but a bitter acrid taste. It is soluble in all the acids, and in ether and alcohol—to a very slight degree in water, is uncrystallizable. It is precipitated by protonitrate of mercury and corrosive sublimate, but not by tartar emetic. Half a grain of emetine acts as a powerful emetic, followed by sleep; six grains vomit violently, and produce stupor and death. In such cases the lungs and intestines are inflamed.

NASAL OPERATION.

The first surgeon, who practised a method of supplying the deficiencies of noses, ears, lips, &c. was one Branca, a Sicilian, who flourished in the middle of the fifteenth century. Nosorenus places Branca at Catanea, and calls him "a celebrated surgeon, who restored ears, lips, and noses." Elysius Calentius, a Neapolitan poet of that time, writing to one Orsianus, who had lost his nose, strongly recommends him to come to Branca, "a man of great abilities, who had learned the art of restoring a nose, either by supplying it from the arm of the patient, or by infixing upon the part the nose of a slave." He assures his friend that he had himself witnessed the operation, and that if he would only come to Naples, and submit to it, he might go home again with as much nose as he pleased.

Vincent Boiani, Bernard his nephew, and some of his descendants, were distinguished at Calabria during the sixteenth century, in the art of supplying defective lips and noses.

Alexander Benedictus, a Veronese, who taught medicine at Padua, some time before the year 1495, is the first medical writer extant who, since the revival of letters, has mentioned this operation of surgery. He states, that in his time new noses were formed with admirable art in the following manner:—The operator dissected the upper skin of the arm with a razor, and then paring off the remaining edges of the nostrils, or if necessary cutting them away, he bound the arm to the head, in order that wound might adhere to wound. After this, the wounds having conglutinated, he took from the arm, with the knife, as much as was wanted for the restoration of the nose, which was accomplished; for the kindred vessels of the nose nourish the flesh which is newly acquired. He adds, however, that these artificial noses badly endured a severe winter; and he recommends his patients to use them gently, lest they be torn from the trunk.

Gabriel Fallopio, who died at Padua, in the year 1563, in his tract *De Decoratione*, alludes to this method of restoring noses.

Ambrose Paré, whose work was printed in 1561, remarks,

that there lived in Italy, some years before, a surgeon who restored lost portions of the nose, by excavating a part of the biceps muscle, of the size required for restoring the nose to its former bulk; inserting the part excavated into the vacancy of the nose, and binding the head and arm together in such a manner that neither of them could possibly move. In forty days the flesh of the arm was agglutinated to that of the nose. The younger son of a noble family in Italy, being weary and ashamed of a silver nose, applied to this surgeon, from whom he returned with a nose of flesh, to the surprise and satisfaction of all who knew him.

Andrew Vésale, a native of Brussels, in his *Chirurgia Magna*, printed at Venice in 1569, treats, at some length, of the restoration of the nose, by supplying the deficient parts from the arm.

Stephen Gourmelen, in his *Ars Chirurgica*, printed in 1580, repeats the assertion of Calertius, that the nose might be formed or refitted either from the arm of the patient, or from the nose of a slave.

Gaspar Taliacozzo, commonly called Taliacotius, a writer, whose celebrity on the subject of the nasal operation has eclipsed all who preceded him, was born at Bologna in the year 1546, and died in the same city in 1599. At his death, the magistracy of Bologna honoured his memory with a statue, which they placed in the anatomical theatre of the University, and which has in its hand *a nose*, as an emblem of the art which he practised with so much fame and success. In the year 1597, he published at Venice his work *De Curtorum Chirurgiâ per Insitionem*. This scarce and singular work is divided into two books, in the first ten chapters of which the author brings all his learning to bear upon the subject of operations for new noses, &c., in illustration of which he has not only quoted medical writers, but has levied contributions on the poets, the fathers, and even the Scriptures; so that we have a motley collection of references to Homer, St. Augustine, Euripides, Horace, Tertullian, St. Gregory, Aristotle, Plutarch, and the book of Genesis. The rest of the work is occupied with minute details of the manner in which he performed the operation for restoring the deficiencies of noses, ears, and lips. His method of restoring the nose was, to dissect a portion of integument, of a square or oblong shape, from the arm of the patient, so that one side of the square or oblong should remain attached to the arm, and the flap, being previously twisted, might be brought in contact with the face. He then proceeded to dissect away the integuments of the edges of the deficient parts. A model of the proposed end of the nose was made of paper; and this, when flattened, served as a pattern for shaping the graft

or flap of skin. The graft was then brought to the nose, by lifting the arm, to which at one end it still adhered, and being found to fit, was fastened by ligatures. The graft or flap of skin having been thus applied to the defective nose, the patient was bound, so that he could not stir in any direction. At the end of twelve days the patient's arm was released from his face, the septum was modelled, plasters and bandages applied, and great care was to be taken for some time to defend the new nose from accidental injury.

This is the Taliacotian or Italian method of operating for artificial noses. The works which have been written since this time on the nasal operation, are little more than abridgments of the treatise of Taliacotius. In fact, the art appears to have almost died with him, and neither France nor Germany were ever acquainted with it, but as an art in use among certain practitioners of Italy. The nasal operation was recommended by Dr. Read, in his *Chirurgorum Comes*, printed at London in 1687; and a few years after this, Sir Charles Bernard, subsequently Serjeant-surgeon to Queen Anne, in a paper inserted in Wotton's *Reflections on Antient and Modern Learning*, wrote in strong approbation of the art, and wished it to be introduced into English practice. Van Helmont, in his treatise *De Magneticâ Vulnerum Naturali et Legitimâ Curatione*, relates a story of a native of Brussels, who, having lost his nose in battle, repaired to Taliacotius to have it restored. As he dreaded to have the incision made in his own arm, a labouring man was found, who, for a remuneration, suffered the nose to be taken from his arm. About thirteen months after his return to Brussels, the adscititious nose suddenly became cold, and after a few days dropped off in a state of putrefaction. The cause of this unexpected occurrence having been investigated, it was discovered, that at the same moment at which the nose grew cold, the labourer at Bologna expired! Dr. Fludd also, in his "Defence of Weapon Salve," says, that a nobleman in Italy, who lost a great part of his nose in a duel, prevailed on one of his slaves to suffer a piece of the flesh of his arm to be cut out, which was so managed, by a skilful surgeon, as to serve in the place of a natural nose. The slave being rewarded and set free, went to Naples, where he fell sick and died: immediately on which, a gangrene appeared on the nobleman's nose.

It is to these superstitious stories, and not to the works of Taliacotius, that Butler refers in the passage which we have quoted at page 176. from the first canto of Hudibras. In the two hundred and sixtieth paper of the *Tatler* will be found a very facetious lucubration on the subject of new noses, founded on the lines of Butler.

We at first gave Voltaire credit for the idea of interring the nose in the same coffin with its parent; but he is so confirmed a plagiarist, that it is never safe to ascribe to him the merit of originality, and, accordingly, he appears to have been indebted for this joke to the writer in the Tatler *.

Among the stories of adhesions of the separated nose, the following, which is related by M. Garengeot †, a French surgeon, whose high reputation procured for him a seat in the Royal Society of London in the year 1728, is one of the most marvellous. "In the month of September," says M. Garengeot, "a soldier of the regiment of Conti coming out of L'Epée Royale, from an inn in the corner of the street Deux Ecus, was attacked by one of his comrades, and in the struggle had his nose bitten off, so as to remove almost all the cartilaginous part. His adversary, perceiving that he had a bit of flesh in his mouth, spat it out into the gutter, and endeavoured to crush it, by trampling upon it. The soldier, who, on his part, was not less eager, took up the end of his nose, and threw it into the shop of M. Galin, a brother practitioner of mine, while he ran after his adversary. During this time, M. Galin examined the nose which had been thrown into his shop, and as it was covered with dirt, he washed it at the well. The soldier returning to be dressed, M. Galin washed his wound and face, which were covered with blood, with a little warm water, and then put the extremity of the nose into this liquor, to heat it a little. Having in this manner cleansed the wound, M. Galin now put the nose into its natural situation, and retained it there by means of an agglutinating plaster and bandage Next day the union appeared to have taken place; and on the fourth day I myself dressed him with M. Galin, and saw that the extremity of the nose was perfectly united and cicatrized."

* Vide page 179.

† Dr. Balfour, of Edinburgh, has published a case of adhesion, almost as extraordinary as that related by M. Garengeot. On the 10th of June, 1814, a man came to him with half the index of the left hand wanting. Dr. B. inquired what had become of the amputated part. The man told him that it had been struck off by the stroke of a hatchet, and that he had never looked for it, but he believed it would be found where the accident happened. Dr. B. despatched a man, who accompanied the patient, to search for it. In about five minutes the man returned with the piece of finger, which was white and cold, and looked like a piece of candle. Without the loss of a moment, Dr. B. poured a stream of cold water on both wounded surfaces, to wash away the blood from the one, and any dirt that might adhere to the other, and then applied, with as much accuracy as possible, the wounded surfaces to each other. On the second of July, the reunion of the parts was complete, and Dr. B. remarks that 'the finger was, in fact, the handsomest the man had;' an observation which reminds us of the predilection of the wag, who, being condoled with on the loss of his leg, replied, that he was sorry for it too, for it was his *favourite* leg.

In justice to Taliacotius, it must be observed, that he did not contemplate the adhesion of parts between which total separation had taken place, and that his theory had no connexion with the extraordinary and exaggerated accounts of the union of divided parts of the nose.

The nasal operation, however, fell into neglect, at least in the west of Europe, until, at the close of the last century, it was again brought into notice by a periodical publication for the year 1794, which contained an account of the manner in which it was performed by an Indian surgeon at Bombay, on a Mahratta, of the caste of husbandmen, whose nose had been cut off by Tippoo in the war of 1792. The Indian operation, which had been practised from time immemorial by the native practitioners, is performed in the following manner:—A thin plate of wax is fitted to the stump of the nose, so as to make a nose of good appearance; it is then flattened, and laid on the forehead. A line is drawn round the wax, which is then of no further use; and the operator then dissects off as much skin as it covered, leaving undivided a small slip between the eyes. This slip preserves the circulation till an union has taken place between the new and oldparts. The cicatrix of the stump of the nose is next pared off; and immediately behind this raw part, an incision is made through the skin, which passes round both alæ, and goes along the upper lip. The skin is now brought down from the forehead, and being twisted half round its edge, is inserted into this incision. A little terra japonica is softened with water, and being spread on slips of cloth, five or six of these are placed over each other, to secure the joining. No other dressing than this cement is used for four days; it is then removed, and cloths dipped in *ghee* (a kind of butter) are applied. The connecting slip of skin is divided about the twenty-fifth day; when a little more dissecting is necessary, to improve the appearance of the new nose. For five or six days after the operation, the patient is made to lie on his back; and on the tenth day bits of soft cloth are put into the nostrils, to keep them sufficiently open. This operation is said to be always successful. The artificial nose is secure, and looks nearly as well as the natural one. It can sneeze smartly, distinguish sweet from unsavoury smells, sustain the application of the finger and thumb, and even bear to be well blown, without danger of falling into the handkerchief.

The Indian operation for the artificial nose, which is a great improvement on the Taliacotian method, was that adopted by Mr. Carpue, in the two successful cases of which he published an account in the year 1816. The cases, however, on which Mr. Carpue

operated for the artificial nose, were more favourable subjects than the one on which Mr. Travers performed the operation, at the Borough, on Friday, November 7th. In Mr. Travers's case, caries of the nasal bones had taken place as early as November, 1822.

GUY'S HOSPITAL.

1. THOMAS J., aged 24, was admitted into Lazarus Ward, Tuesday evening, November 11th, with simple fracture of the right tibia and fibula about the middle of the leg. The limb was placed on its outer side, in a semiflexed position, and ordered to be kept wet with spirit wash. Two lateral splints, well padded, extending one on each side from the knee to the ancle-joint were applied. The patient has felt a good deal of uneasiness in the limb, which has prevented him from taking much rest, but is now doing pretty well; bowels are regular; tongue clear; appetite good; pulse natural.

2. John D., aged 62, labourer, was admitted into Lazarus Ward, Wednesday morning, Nov. 12th, with an injury in the neighbourhood of the right knee-joint. On the first examination, it was thought that the outer condyle of the thigh-bone was fractured, but after the patient was put to bed, and the limb examined a second time, it was ascertained that there was a fracture of the upper and outer part of the tibia, extending three or four inches in a perpendicular direction. The limb was placed in an extended position, and cloths wetted with the spirit wash were ordered to be kept to it. A splint has been applied on the back part of the thigh and leg, from the beginning of the ham to some way below the joint; the knee-joint itself was enveloped with moistened pasteboard, and a bandage above and below the joint was applied. The heel is slightly elevated. To-day, (November 14th,) the limb is swollen a little; no symptoms of constitutional disturbance present. His bowels, however, have not been open since the accident. It may be proper here to state, that, in the Borough hospitals, there are no beds which have contrivances for the patients to void their feces, without being obliged to move themselves; and, therefore, in cases of fracture, where it is desirable to prevent motion of the fractured limb, great mischief must be done to the part, from a want of some such contrivance.

ST. THOMAS'S HOSPITAL.

Nov. 7th, 1823.

AT one o'clock, this day, the operating theatre was crowded to excess; and at a quarter past one, a boy, a slight history of whose case we give below, was placed on the table to be cut for the stone.

The lad, J. H., six years of

age, was admitted into the hospital, Oct. 30th, 1823, under the care of Mr. Travers. For two or three years past, he has been affected with pain in making water, but within the last twelve months has been getting much worse, and at present feels a frequent desire to void his urine, which, however, he can never do without feeling excruciating pain in the lower part of the abdomen, top of the penis, and down the thighs; the urine is high coloured, and stains the clothes. Has a very voracious appetite; tongue red and moist; pulse small and 144. The operation was performed in perinæo, and a stone of the size of a pigeon's egg was extracted. The instrument used for opening the bladder, was a gorget, cutting on one side only.

TALIACOTIAN OPERATION FOR A NEW NOSE.

After the child had been removed, a man came into the theatre to undergo an operation, which, though not entirely new in the annals of surgery, had never been performed (we believe) at the Borough. The operation was that for an artificial nose; and the person on whom it was performed was about thirty-four years of age, stout, of short stature, with a broad face, and the nose completely destroyed. Had taken large quantities of mercury during the last two years for syphilis, and about twelve months ago his nose first became diseased, since which time the disease has been gradually spreading, and at present the septum is nearly destroyed, and exfoliation of a great part of the nasal bone had taken place. The man was placed on the table, flat on his back, with the head a little depressed; the first step of the operation was to remove the diseased parts, and pare the edges from the old nose; after this, a portion of integument, previously marked with ink on the left side of the forehead, of an irregular shape, was detached from the surrounding skin, with the exception of a small piece between the eye-brows. The integument was then brought down over the face, in the situation of his former nose, the point by which it was joined to the forehead being twisted, in order that the part which was internal before its detachment might be so also in its new situation; the skin was modelled to the shape of a nose, and confined in its proper situation by five sutures; strips of adhesive plaster were placed longitudinally on each side of the nose, then a compress of lint over each, and a strip of adhesive plaster over them again; two dossils of lint were introduced into the newly-formed cavity for the nostrils; and, lastly, pressure, by means of adhesive straps, was made on the upper part of the nose, where the integument was twisted. The spot from which

the skin was removed, was dressed with simple dressing and sticking plaster. During the operation, the patient was often obliged to raise himself from the table for the purpose of spitting out the blood which got into his mouth, a circumstance which retarded it a little. The operator was Mr. Travers; and the whole was completed in less than half an hour. This operation is called the Taliacotian, from the name of its original inventor.

"So learned Taliacotius from
The brawny part of porter's bum,
Cut supplemental noses, which
Would last as long as parent breech;
And when the date of nock was out,
Off dropp'd the sympathetic snout †."

The modern operation has, however, this advantage over the Taliacotian method; that the patient is not exposed to the liability of losing his nose by the dissolution of another man's posteriors.

† Voltaire adds the following joke in his version of this passage, which may amuse some of our readers.

Ainsi Taliacotius,
Grand Esculape d'Etrurie
Repara tous les nés perdus,
Par une nouvelle industrie:
Il vous prenait adroitement
Un morceau du cul d'un pauvre homme,
L'appliquait au nez proprement:
Enfin il arrivait qu'en somme,
Tout juste à la mort du prêteur
Tombait le nez de l'emprunteur,
Et souvent dans le même biere,
Par justice et par bon accord,
On remettait au gré du mort
Le nez auprès de son derriere.

Case.

William V., the man on whom the above operation for a new nose was performed on Friday (Nov. 7th), was admitted into George's Ward, St. Thomas's Hospital, Nov. 7th, 1822, under the care of Mr. Travers. The report of the state of his nose, at that period, is as follows: "Caries ossis nasi; entire destruction of the septum narium, which has existed eight months, following the excessive use of mercury." He remained in the hospital till the beginning of this year, when he went out much benefited by the means which had been employed in the treatment of his disease. In the middle of April last, he came back for the express purpose of undergoing an operation for a new nose. This, however, from various causes, was put off from time to time, and it was not till after the repeated entreaties of the patient, and that it had been judged a favourable case for the operation by Mr. Carpue, that Mr. Travers performed it on Friday, Nov. 7th, a full account of which operation, we gave given above. It may be necessary to state that there was no diseased action going on in the nose at the time the operation was was performed. We shall now proceed to give a daily account of this most interesting case.

Saturday, Nov. 8th.—The patient was removed yesterday from the operating theatre to a warm ward; directed to have a piece of flannel kept over his face. For half an hour after the operation, he had a sense of burning in his forehead. An anodyne (opii. gr. j.) was prescribed for him to take at bed-time; feels sore all over, but is in no particular pain; tenderness on pressure in the right and left hypochondriac regions; tongue white, but moist; thirsty; pulse 72, full; skin not very hot.

One or two strips of plaster were removed from the forehead and sides of the nose; nose of a livid colour, no feeling on the left side, a little on the right; has a scalding sensation on the right side of the face; breathes by the mouth; no discharge from the wound.

Nov. 9.—Passed a pretty good night; pulse 90, soft; tongue covered with a white fur, excepting at the edges, which are red; mouth parched; took a very good breakfast; bowels not open since the operation; skin cool; pain on pressure in the epigastric region.

Nose nearly black; there is more feeling in it to-day; the patient says that he has no feeling in the top of the head; left eye-lid sore; right side of the face near to the nose redder than natural; the dossils of lint were removed from the inside, together with all the dressings on the sides of the nose externally. The nose itself was ordered to be kept constantly wet with cloths dipped in heated gin. He was ordered to take half an ounce of castor oil immediately, and a table-spoonful of wine every four hours.

Nov. 10.—Did not sleep well last night, felt very giddy at times, which the patient attributes to the smell of the gin; bowels open four times yesterday, shortly after he took the medicine; pain in epigastrio removed; tongue not furred so much as yesterday, but dry; mouth still parched; pulse 72, but full; skin cool; hawks a good deal of mucus, which is of an offensive smell, thick consistence, occasionally of a dark colour, and streaked with blood; this, he says, comes from his nostrils.

The nose is of the same colour as yesterday, nearly black, excepting the root, which is of a pale red. It feels sore all over; and from the pressure of the wet cloths, is very much flattened towards its base. There is a little discharge of matter from the superior part of the right side of the nose. He still continues to have little or no feeling at the top of the head. The application to the part of cloths wetted with gin was ordered to be discontinued; and a piece of lint, moistened with turpentine, to be applied to the part, and to be renewed every six hours. This, however, was done but twice, as it was countermanded in the evening, and a little simple dressing ordered

instead. The following medicine was also prescribed:—R. Pulv. Cinchon. ʒj et capiat 4ª horis ex. cyatho vini rubri.

Nov. 11.—Passed a very restless night; pulse 78, full; giddiness in the head; mouth much parched; tongue a little cleaner; bowels not open.

Nose very much flattened—of the same colour as yesterday, excepting that there is a streak of pale red to be seen, proceeding from the root half way down the bridge. On the left side adhesion appears to have taken place: on the right side the edges of the nose are not in close contact with the face, there being a little furrow between them; from this part the discharge comes.—No feeling in the nose; deadness from the top of the head removed; left side of the head and face very sore.

Bread and water poultice, warm, was ordered to be kept to the nose; the wound of the forehead was dressed; looking well. Medicines to be continued.

Nov. 12.—Did not sleep last night, but feels much better; pulse 84, but soft; tongue cleaner; mouth not so much parched;—bowels not open.

More sensibility in the nose, very flat, and extending down to the edge of the upper lip; the lower two-thirds are very black, and appear as if they would soon separate; the upper third looks well; offensive smell from the part; discharge from the right side of the nose; a piece of lint, dipped in nitric acid wash, was ordered to be applied, and to be renewed twice a-day.

13th.—Did not sleep well last night; bowels not open; tongue clean and moist; pulse 72, hard; head sore all over; no feeling in the nose; discharge from it as well as the forehead; upper lip still sore. The lint wetted with nitric acid was ordered to be discontinued, and simple dressing substituted. For these two or three days past fears were entertained that the lower two-thirds of the nose would slough, but to-day, Mr. Travers is inclined to think that the sloughing will be merely superficial.

Friday, 14th.—Slept better; tongue pale white, tip and edges red; pulse 78, hard; spirits good. Has hitherto been kept on milk diet, but to-day is allowed to take meat, beer, and porter; bowels not open since Sunday. Continues his wine and bark.

Soreness of the head and upper lip still continues; some feeling in the nose, which is of the same colour, black; discharge from the part rather acrid; no adhesion on either side; the left side of the nose closer to the integument of the cheek than the right; wounds of the forehead dressed every day; the granulations are very healthy.

Saturday, Nov. 15.—Not so well; slept badly; appetite bad; pulse 78, hard; took some castor oil; has had two stools; nose very flat, and the

line of separation between the lower two-thirds of the nose and the upper part very distinct; upper lip and the head very sore; face gets very warm towards night.

16th.—Sleep disturbed; spirits low; pulse 66, small; bad taste in his mouth; tongue white; the lower two-thirds of the nose completely separated from the upper part; head sore.

17th.—Slept soundly; pain in the head; pulse 72, hard; bowels not open since Saturday; discharge from the forehead and nose; lower part of the nose completely separated; upper lip sore.

18th.—Rest disturbed in the night; pulse 72; spirits low; appetite good; bowels not open:

Mr. Travers removed the detached piece of the nose by cutting the suture.

Wednesday, 19.—Slept better; spirits good; has taken some castor oil; bowels open twice; pulse 72.

Granulations of the forehead exceedingly healthy; edges of the remaining part of the nose not in accurate opposition; pain in head gone.

20th.—His sleep is not sound; pulse 90, small; nose and forehead just the same.

21st.—Symptoms as yesterday; has kept his bed ever since the operation; continues taking wine and bark; and castor oil occasionally, to regulate his bowels.

Dec. 24.—The place in the forehead whence the skin was removed is nearly well, and the patient has not been benefitted by the operation, excepting that at the upper part of the nose there is a small piece of new skin.

MIDDLESEX HOSPITAL.

CASE OF STONE IN THE BLADDER.

Robert Hayden, five years old.

THIS child has frequent desire to make water, and after voiding it is in great pain. His foreskin is long, and a little inflamed, and in the agony of his suffering he pulls the penis, drawing out the foreskin. These symptoms sufficiently indicate the presence of a stone in the bladder.

Oct. 3.—To-day the child was sounded, and a stone discovered in the bladder—it is moveable, being sometimes felt on the convex surface of the sound, and at other times on the concave.

7th.—He was again sounded to-day, and the stone felt.

18th.—The sound was again introduced, and at first the stone could not be felt; but upon lifting the hips and lower extremities, and making the child rest upon his shoulders, the stone came again in contact with the sound. He sleeps well, and suffers most when he is up.

19th.—The operation is fixed for Thursday next, the 21st. The bowels were opened with small doses of calomel and rhu-

barb; and a dose of laudanum was given to the patient before the commencement of the operation, with the view of enabling him to retain his urine.

21st. — Operation. The staff being introduced, and the child secured in a proper position, the incision was commenced by introducing the point of the knife between the staff and the left crus penis; and was continued downwards to the left side of the anus. A cut was then made towards the neck of the bladder. The point of the scalpel was then thrust inward, and obliquely upwards, into the groove of the staff, and carried on in this direction through the prostate. The nail of the forefinger of the left hand being now admitted into the groove of the staff, a straight probe-pointed bistoury (being the knife invented by Mr. Thomas Blizzard) was introduced along the groove of the staff, and the wound of the prostate enlarged. The effect of this instrument being unsatisfactory to the operator, he introduced a curved probe-pointed bistoury, after which the finger was admitted to the bladder, and the stone felt. The blunt gorget being now introduced, the forceps were passed along it to the fundus of the bladder, but the efforts of the surgeon were not successful in seizing the stone: wherefore, withdrawing the forceps, the finger was introduced, and the stone being felt, was with assistance of the scoop or lever extracted. Before the wound was dressed, a tube was introduced into the bladder—a piece of oiled lint was then put over the wound, and the bandage brought round upon the perinæum, to which the tube was attached.

31st.—There has been nothing particular to notice in this child's case. Such symptoms as gave a little alarm, were, upon a closer inspection, referred to disorder in his bowels, which, by a few doses of calomel and rhubarb, was speedily removed. On the third day, the tube was withdrawn from the wound, which is in a healthy condition.

Nov. 8.—The urine comes by the natural passage, and the wound is rapidly closing.

14.—Runs about the ward quite well.

This operation was performed by Mr. Cartwright.

Nov. 13.—J. H., a labourer, residing in Marylabonne Court, was brought into the hospital about five o'clock this evening, under the following circumstances:—Whilst at work, in ascending the ladder, his foot slipped, and he fell from the height of eight or nine feet upon some iron railings, encompassing an area. The point of one of these railings penetrated his back, about three or four inches, just below the inferior angle of the scapula, on the right side, fracturing his ribs near the spine, and taking a course upwards and inwards. He remained in this awkward situation for nearly five minutes,

his feet barely touching the ground, when his fellow-labourers released him. The wound, upon examination, had not exactly the appearance of a simple puncture, but very nearly so. The extent of the injury could not be readily ascertained. The house-surgeon reduced the parts as nearly as possible to their original situation, which were kept together by adhesive straps. A compress and roller were afterwards applied. V. S. brachio ad ℥xx. Bowels to be opened with equal parts of calomel, jalap, and ginger. Breathes with great difficulty — complains of a sense of fulness in the chest, by which it is feared there is extravasation of blood to some extent. No appearance of emphysema—no discharge of blood from the wound. Eight o'clock, p. m. —Symptoms not at all reduced — breathing still more difficult—complains of great pain in the wound, extending down in the course of the spine to the loins. Pulse 80.

14th.—Pulse 74, rather full —breathes more freely—pain in the wound, and sensation of fulness in the chest, still continues. V. S. ad ℥xxx.—To drink linseed tea, mixed with a small proportion of the tinct. camph.

23d.—The patient is doing well; he has a slight difficulty of breathing at present, but upon being questioned, he admits that he has been asthmatic for some years.

The only other case worth noticing, is that of J. D. æt. 36, residing at Barnet. He was brought here in a cart from the other side Barnet, on the 28th of October last. He was thrown down by the horses attached to a mail-coach, the wheels of which went over both his thighs and fractured them. The right, a compound fracture,—the bone protruding about a hand's breadth from the internal condyle; a profuse hæmorrhage followed. The other thigh bone was fractured a little further up. The hæmorrhage was stopped, the protruding bone reduced, and both thighs were placed on the inclined plane. Tumefaction and heat in both thighs then came on. Twenty leeches were applied, and afterwards a lotion, composed of acetate of ammonia, spirit of wine and water.—A draught of senna and salts was given him.

30th.—Passed a good night; his thighs remarkably easy; pulse quiet; tongue clean. A draught of infus. sennæ with ℥iij. liq. ammon. acet. ter. die. —Calomel and antimony every night.

Nov. 3.—Considerable tumefaction extends into the right knee-joint. It is feared that the fissure of the bone has extended into the joint. Apply a dozen leeches to the knee-joint.

The man has since been free from all pain; the thigh-bones retain their position, and he is going on very well.

Sarah H., æt. 25.—This young woman, in her first la-

bour, met with a very melancholy accident. The child's head, suddenly descending, burst through the perinæum, and formed one opening of the vagina and rectum. The consequences of this rupture are very distressing: the womb and the vagina falling down on the slightest exertion, and even on assuming the erect position. This patient applied some time since for the purpose of submitting to an operation, but, being at that time in a state of pregnancy with the second child, the operation was of course deferred. She is now returned for the same purpose, and although the case is nearly hopeless, it was determined to attempt something for her relief.

The operation was performed on the 17th of October, in the following manner:—

After distinguishing, as carefully as possible, the extent of the laceration, and marking the commencement of the cicatrix on the side of the labium, a tenaculum was introduced for the purpose of lifting up the substance. A portion was then dissected off down to the slit in the anus; another portion was in the same way dissected off on the opposite side. The twisted suture was used, but as the lips of the wound gaped a little, a simple suture was likewise employed, and the whole brought together with as much precision as had been anticipated. A pessary was now introduced to force up the uterus, and to prevent the protrusion of the parts. Simple dressings were applied, and over them a dossil of lint dipped in cold water.

Enema amyli cum Tinct. opii gtt. xl. statim.

Nov. 14.—This woman is now nearly in the same situation as previous to the operation, for the edges of the wound did not unite by the first intention, consequently no relief has been obtained. She at present uses the pessary, which prevents the protrusion of the uterus, &c. Most cases of this kind, if of any extent, are melancholy and hopeless.

Nov. 1823.

LECTURE XII.

Ulcers.

In treating of this subject, I shall first describe the appearance of ulcers in what may be termed their healthy state, I shall then detail the several circumstances which render their cure difficult, and proceed to point out to you the remedies which are found to be the most efficacious in practice. An ulcer may be defined to be a granulating surface secreting matter. When an ulcer is in a perfectly healthy state, the appearances which it exhibits are as follows:—The granulations are florid; their blood-vessels possess a consi-

derable quantity of arterial blood, and the freedom of circulation produces this florid appearance. The granulations are equal on the surface of the sore, rising a little above the edges; for it is necessary, in order that a sore should heal kindly, that the surface of the ulcer should be a little more elevated than the surrounding skin. The surface of the sore secretes matter which has a milky appearance, or rather the appearance of cream. The edge is whitish in colour, and adapts itself to the surface. In this manner the granulations springing from the surrounding skin are very nicely adapted to the circumference of the sore, so that the granulations of the edge unite with those on the surface. When, therefore, you see the surface of an ulcer red, the granulations equal, the surface rising a little above the edge, the discharge of matter healthy, and the edge of the sore nicely adapted to the surface, you will say that this ulcer is in a healthy state. In order to produce this state of the sore, the best practice which you can generally pursue is to apply poultices and plasters.

When you open an abscess, or when a wound is produced which cannot be healed by the adhesive process, the best application is a poultice, for the purpose of exciting the growth of granulations. This poultice must not be too warm; it should be gently stimulating, so as not to repress the growth of granulations, but to form a soft bed to which they may spring. The effect of the poultice is, by its warmth and moisture, to encourage such a degree of action as may promote the rising of the granulations. When the granulations have risen to the edge of the sore, then the practice must be altered; and the object is to adapt the granulations of the edge to those of the surface. For this purpose adhesive plaster or unctuous substances are employed, with a view of pressing down the granulations of the edge of the sore on those of the surface, so as to make them unite. These are the principles of treatment in the cure of ulcers. We first encourage the growth of granulations by the application of the gentle stimulus of poultices, and when the granulations have risen to the edge of the surrounding skin, we press down the granulations of the edge on those of the surface, either by the application of adhesive plasters, or of unctuous substances. The

more unctuous such substances are the better; for the vessels will have a greater facility in shooting towards the centre, and the granulations embedded in this unctuous matter will more readily extend along the surface of the sore.

Such are the principles of treatment applicable to ulcers in the healthy state; we shall now proceed to consider the impediments to the healing process which frequently occur, and which render a different mode of treatment necessary.

The first circumstance which renders the cure of ulcers difficult, is the too prominent state of the granulations, producing what is vulgarly called proud flesh. In this state, the granulations rising considerably above the edge of the surrounding skin, are necessarily prevented from uniting with those of the surface. In order to prevent the continuance of this state of the sore, the common treatment is to apply dry lint to the centre of the sore, and some unctuous substance to the edges. The lint, by its pressure, prevents the growth of granulations in the centre, while the unctuous substance allows the granulations on the edge to proceed and inosculate with those on the surface of the sore. The lint should not be applied to the edge of the sore, for if it be, the granulations will be prevented from proceeding towards the centre of the sore. The nitrate of silver, and the sulphate of copper, are employed for the purpose of destroying luxuriant granulations near the edges of the sore. Here our practice is just reversed. Lint is applied to the centre of the sore, for the purpose of keeping down the granulations on the surface; whereas the caustic is applied for the purpose of keeping down the granulations which are nearest the edge of the sore. In this way we promote the healing of the sore, forming a little circle by the caustic from day to day until we arrive at the centre. Adhesive plaster is used with the same intention, viz., that of keeping down the granulations. The common adhesive plaster is, however, too stimulating for this purpose; a plaster, composed of equal parts of the emplastrum thuris compositum and the emplastrum saponis, is a much better plaster to promote the healing of ulcers than the common adhesive plaster. This is a point deserving attention; because, if the application be of so stimulating a nature as to excite in-

flammation and excoriate the skin, we are often under the necessity of leaving off the adhesive plaster. It sometimes happens, that the action is so great as to oblige us to apply a sheet of lead to the surface of the sore; when this is necessary, you may apply a piece of lint covered with the ceratum cetacei, over these a piece of sheet lead, and round the whole a roller should be passed of about five yards in length. These are the various modes of treatment in this state of the sore.

The next circumstance to which we shall advert, as giving rise to difficulty in the treatment of ulcers, is a languid state of the sore, in which its action is too slight. What is the character of such a sore? You may know that a sore is in this state, by the glossy and semi-transparent appearance of the granulations; instead of the florid hue which characterizes granulations in their healthy state, a considerable portion of them is bloodless. The fact is, that the vessels near the surrounding parts have not sufficient power to throw the blood to the extremities of the granulations. To remove this glossy appearance, and produce a healthy state of the sore, the application most commonly used is the unguentum hydrargyri nitrico-oxidi. This is a strong stimulating application, which occasions a determination of blood to the part, and produces a florid redness in the granulations, instead of the semi-transparent appearance which they assume in the languid state of the sore. It produces, however, a white appearance in the edge of the sore, arising from the thickened state of the cuticle, which prevents the growth of the granulations on the edge. This may be corrected by the application of the unguentum hydrargyri fortius to the edge of the sore. Lotions are frequently applied with the same view; such as the sulphate of zinc, in the proportion of two grains to one ounce of water; or the sulphate of copper in the proportion of one grain to three ounces of water. The oxymuriate of mercury, and the liquor calcis, are also used for the same purpose. In addition to these applications, it will be necessary to bind up the sore with a roller, and to allow the patient to take a great deal of exercise; for, without exercise, a healing disposition will not be produced in the sore.

It will be highly useful in these cases to employ some

stimulating plaster, such as the emplastrum galbani compositum, for the adhesive plaster will not answer the purpose: the sores are languid, and the object is to increase the action in the part; this will be greatly assisted by giving the patient a nutritious diet, allowing him at the same time to take exercise, and, in fact, by doing every thing to improve the constitution.

Well, the next stage of ulcers we come to, is that to be met with in patients on their admission into the hospitals. When the surgeon goes round the hospital on the first day after the taking in, he will meet with a number of persons with inflamed ulcers on their legs; and what, I ask of you, is the character of these sores? You know that there is a sercus discharge from these wounds, a bloody ichor, composed of serum and the red particles of the blood —a disposition in many cases to slough,—that the surface is covered with a brown incrustation, and the skin and surrounding parts are highly inflamed. Well, then, you will find that the same treatment which is applicable to inflammation in general, will be of service in these cases, where inflammation has been kept up for a long time to a high degree. Rest must be enjoyed; the patient must also keep in bed in the recumbent posture. Fomentations and poultices must be employed: fomentations will tend to produce a secretion from the part; and poultices, by their soothing quality, to promote the growth of granulation;—both will evacuate the matter from the wounds. Then, with these applications, the vessels begin to form, the sore assumes a better appearance, healthy secretions are thrown out, and granulations shoot up, fibrous matter is deposited, and in a little time you will have the skin covering the wound. Fomentations, poultices, rest, and the recumbent posture, must be enjoined, and the patient must be purged. The best cathartic that you can administer is calomel and compound extract of colocynth, five grains of each at bed-time; and a draught of the infusion of senna and sulphate of magnesia on the following morning. By this plan you will do more to subdue the inflammation than by any other I know. If the part in the neighbourhood be much inflamed, leeches had better be applied near the circumference of the ulcer: with this treatment, in a very few days granulations will spring up, pus will be secreted,

and the surrounding edges will assume a healthy appearance. Without, however, attending to the constitutional treatment, all your local applications will be of very little avail.

Gangrenous Ulcers.—This kind of ulcer you will very frequently see in a man who has been in poverty and distress for a long time, going up and down the streets of London, looking out for an asylum where he may rest his head; this person comes to the hospital, at last, in a reduced and emaciated state. When you see a wound of this description, you will know it by the surface being perfectly free from discharge; the surrounding edges of a livid appearance, with small vesicles or blistered spots on them; and the patient suffering much from irritative fever. Seeing this state of the wound, then, you enjoin the patient the recumbent posture, which is essentially necessary to promote the separation of the dead parts. The principle of treatment in these cases is to produce a very slight increased action in the part. Sometimes, when the action is excessive, you must, on the contrary, soothe the part;—both will be sometimes good. When there is debility of the part, a slight stimulus should be employed; but when there is excessive action, it is to be avoided.

The best application that I know for producing a slight stimulus and checking gangrene of the part, is the nitric acid; there is none equal to this: fifty drops of it to a quart of distilled water will be found a most useful remedy. The acid may be increased to a drachm; this may be done or not, just as it may give pain to the part; but generally the average quantity is fifty drops. I have seen, in a short time after this application, a quick separation of the parts from sloughing, to which there is always a tendency; and healthy granulations spring up, being, as the chemists would call them, oxygenated; that is to say, the carbon being thrown off from the arterial blood in the vessels with which they are supplied. Here the granulations are of a beautiful florid red: this, then, is a most useful remedy.

Oiled silk should be applied to the wound, so as to prevent the smell arising from the parts tainting the room; for it is always considerable when the process of sloughing is taking place, and granulations are arising; an advantage, though a slight one, compared with

the others, in the use of the nitric acid, is that the offensive smell is nearly taken away by it, the sulphuretted hydrogen is destroyed. Another very good application to sores of this kind is nitre, in the proportion of one drachm to a pint of water; this agrees very well with the sore, and has the same effect, though in a diminished degree. It appears that all the combinations of the nitric acid are good. Sulphuric acid is of use also in these cases, six drops of the acid to an ounce of water. The muriatic acid has not the same effect as the other two. If nitric acid be applied to the wound, the granulations will assume a red and healthy look; if the sulphuric be, they will have nearly the same appearance; but if the muriatic acid be put to the wound, it will be seen that it will have a comparatively slight effect on the granulations, and, therefore, it is an inferior remedy in the treatment of these wounds. Poultices made of port wine, porter, dregs of ees, yeast, a large spoonful of it to a pint of meal, may be all used. Gentlemen, you must have recourse to a great variety of applications; for after you have tried one, which at the beginning did good, you will, from the wound getting worse under its use, be obliged to change it for another, and so on. There is at this time a girl in the other Hospital with sloughing of the pudendum; a variety of means have been used, all of which, at the outset, relieved her a little; but none continued to do her good for any length of time, and she will, most probably, in the end, fall a victim to the disease: it is upon this account that I mention to you so many remedies. The carrot-poultice is also a very good application. The constitution of the patient must be attended to, or else the local means will do very little; therefore, local applications must be aided by constitutional remedies; and what is the best medicine that you can administer? Opium and ammonia, Gentlemen;—twenty drops of tincture of opium, three times a day, with ten grains of the ammonia, in an ounce and half of camphor mixture, and a little (one drachm) of compound tincture of cardamom.

This is the medicine which will agree best with the patient. He must be well nourished, or at least he must have as much as his digestive powers will allow; port wine also must be given, and spirits must be allowed to those who have been

addicted to their use. By brandy and opium I have seen these sores cured; in fact, they are our sheet-anchors in the treatment of these ulcers. But more of this in another Lecture, as I shall have to speak of gangrene again.

The next kind of ulcer that I come to is the IRRITABLE ULCER.

This sore is extremely difficult to cure. How then are you to know it? When you find the granulations most unequal; in some parts being very high, in others very low. The discharge from the wound consists of a bloody pus. I do not know what to compare it to better (though it is not quite so good) than strawberry cream. (*A laugh.*) It is pus mixed with the red particles of the blood. This sore, then, may be known by the inequality of the granulations, the nature of the discharge, and the great pain and tenderness in the part; so that the patient, when touched in that part, is like a sensitive plant. As you will be sure to find considerable difficulty in the treatment of these sores, I will tell you, the best application that you can make use of is one compounded of the cetaceous ointment, gray oxide of mercury, and powdered opium.

℞ Unguent. Cetacei
—— Hydr. Mit. ā ʒfl.
Pulv. Opii ʒj.—M.
Fiat unguentum.

This must be spread on lint, and applied to the part twice a-day. What are the internal remedies you ought to exhibit in these cases?—Gentlemen, calomel and opium: these are the medicines on which you are to rely; a grain and a half of calomel and a grain of opium morning and evening. Nothing will be of so much service as this medicine. It should not be carried so far as to produce ptyalism, or to affect the constitution severely; but it should be given so as to restore the secretions, and to diminish the action of the nervous system. The calomel will do the first, and the opium will lessen the nervous irritability. The treatment of inflammation has been improved of late by calomel and opium. The effect of this medicine in chronic inflammation may be seen in the disease called Iritis. Here calomel and opium must be exhibited; nor should a deposit of white matter, having the appearance almost of pus, into the anterior chamber of the eye, be any barrier to their use. Give five grains of calomel and a grain of opium night and morning; and in the space

of a week, if the eye has not suffered a good deal, or become disorganized, this remedy will correct the inflammation. We use other aids, such as the compound decoction of the sarsaparilla. Some think it a placebo; others have a very high opinion of its efficacy. I do not think much of it myself in those cases; but, after the use of mercury, it diminishes the irritability of the constitution, and soon soothes the system into peace. With this view, its aid, combined with other remedies, may be of use.

So much for irritable ulcers. Before I conclude this part of the subject, however, I will mention a case which just occurs to me: I allude to that of Mr. Lucas, the surgeon of the other Hospital. That gentleman, in consequence of having pricked his finger, had a very irritable sore, which obliged him to go into the country, where he remained for a considerable time. The remedy which he found most efficacious for bringing the sore into a healing state, was the application of a solution of nitric acid, very much diluted, and the compound decoction of sarsaparilla. From the latter he thought he derived considerable benefit. By these means, and by attention to his general health, he effected a cure; but his life was in considerable danger, from the irritable sore produced by this apparently trivial accident.

Sinuous Ulceration.—It is necessary to explain here well what I mean. Whenever, therefore, a sore extends to any considerable depth, so that the discharge has to travel through a channel before it arrives at the surface, such an ulceration is called sinuous. There are two reasons why these ulcerations are difficult to heal: first, from matter forming at the bottom, forcing its way through the passage, and thereby disturbing the healing process, by breaking down whatever adhesions or granulations form on its sides; and, secondly, the same interruptions occur from the actions of the muscles, when these ulcerations happen in muscular parts. Thus, if the healing process has commenced in fistula in ano, when the sides of the fistula are at rest, the first time that the person has a motion, the sphincter ani, by its action, will destroy all the newly-formed adhesions and granulations; consequently, if the sphincter be divided, and the parts have rest, granulations will form, remain undisturbed, and a cure be the re-

suit: this clearly shows that the motions of the sphincter occasioned a continuance of the evil. Sometimes in these cases, for the purpose of exciting the adhesive inflammation, injections are used. Now which is the best? In my opinion, tinctura lyttiæ: it readily produces inflammation; adhesive matter is thrown out; you take care to keep the sides of the sinus in contact; and by these means the parts will permanently coalesce. Sinuses of the rectum, however, are seldom cured without an operation; indeed, I have met with but two such cases: one was that of a gentleman who came from the north of England; he had been annoyed by a fistula on each side of the anus, one of which was operated upon by the late celebrated Mr. Hey, of Leeds. He was cured on that side by the operation; but as it was attended with great loss of blood, the patient was too much frightened to be cut again, and came to town for my advice. I examined him; and finding that there was considerable space between the anus and fistula, I advised him not to submit to the operation, and said that I would try to relieve him without it. I injected first port wine and water: this did not answer—it was not sufficiently powerful. I therefore threw in port wine alone, and succeeded in obliterating the canal. I was fortunate in this instance; for I can assure you that fistula in ano is seldom, very seldom, completely cured without an operation. When you do not succeed by injection, you may then employ the caustic bougie. Still pressure will be necessary; and it is quite impossible that you can succeed without it. When the fistula is very deep, it may be divided into two; or a seton may be introduced, and kept in for a fortnight or three weeks, with a view of stimulating the parts for the purpose of filling the cavity with granulations.

LECTURE XIII.

In this evening's Lecture, I shall continue the subject of Ulceration. Ulcers are frequently formed for the purpose of allowing the discharge of extraneous bodies; when such substances become lodged, therefore, in any part of the human frame, inflammation is excited—pus becomes secreted, which, pressing towards the surface, ulceration takes place, and the extraneous substance is thus afforded an opportunity of escaping. Ulcers frequent-

ly occasion, to a very considerable extent, exfoliation of bone: here you can assist nature by applications which act chemically on the parts; apply, for this purpose, a lotion composed of muriatic acid and water, or nitric acid and water: this wash will dissolve the phosphate of lime, or earthy matter of the bone; and by removing this inanimate substance, the power of the absorbents will be increased, and a quicker separation of the diseased from the healthy parts be the consequence. The acids, however, have not so great an influence in these cases as you might be led to expect from what chemical writers have stated; still, however, you will find them to be of use, and they should therefore be employed.

Ulcers which occasionally form on the fingers and toes, are sometimes exceedingly difficult to heal, from an irritation caused by portions of the nails. You may think this too trifling a subject to require a moment's consideration; but I can assure you the truth is far otherwise. A nail, for example, from pressure or some other cause, shoots into the skin beside it; a fungus springs up; the surgeon applies caustic and destroys it: in a short time it rises again; the caustic is repeated, and the fungus disappears: it speedily, however, returns, and will continue to do so, notwithstanding all his efforts to the contrary, unless he remove the irritating cause. Now this cause is the projecting portion of nail; as soon as that is got rid of, the fungus will cease to grow, and the ulcer immediately heal. The best methods to adopt for the purpose of radically relieving these troublesome affections are as follow;—Pare down the nail as thin as you can without producing bleeding, then raise it a little, and introduce between it and the sore a small piece of lint; in this way the irritating cause may generally be removed. It sometimes happens, however, that the sore is so exceedingly irritable, that even lint cannot be lodged on its surface without producing great increase of inflammation and pain; in such cases, what I do is this:—with a pair of scissors I slit up the nail on that side where the disease exists, and then with a pair of forceps turn back and completely remove the divided portion. This is a very painful operation certainly, but I have known persons get well by this treatment in ten days, where the complaint had for

months resisted every other. The applications to be used after the operation are of little importance; poultices are the best, and these will be required but for a very limited period; for the irritating cause having been removed, the fungus will soon disappear. The next best plan to be adopted, for curing these cases, is the application of a blister; this brings away the cuticle, and often the nail along with it. The most lenient method is the one first mentioned, viz., the introduction of a piece of lint. Mr. Hunter, in alluding to this disease, said that the parts were not in a state of harmony. This is very true, and a very proper expression; he also applied it to those cases where a disease in the gland producing the nail, causes the nail to turn black; such affections are not uncommon, and are often thought to be syphilitic, and I have frequently known persons salivated in consequence.—This opinion, however, is perfectly erroneous. You must wash the sore with liq. calcis and calomel, and administer the pil. hydr. submur. comp. and decoct. sarsæ.

Sometimes, in these cases, we are obliged to dissect out the gland that produces the nail; and though the operation is a most painful one for the patient, yet we are, for the purpose of affording permanent relief, compelled to perform it.

Whitlow, what is it? Why, an exceedingly painful swelling, terminating in an abscess by the side of a nail. The principle is this: the matter forms at first under the nail, but being unable to force its way through that horny substance, burrows under it, thus producing excessive pain and irritation. Fungous excrescences often arise in these cases, which induce the surgeon to apply caustic; this practice is worse than useless. You should, after fomenting or poulticing the part, remove the loose portion of nail; this permits the matter to escape, and instantaneous relief is the result.

The next ulcer that I shall describe is the *menstrual:* I mean by this, a sore which is once in three weeks or a month covered with blood. This complaint is connected with amenorrhœa. In going round the hospitals, you all must have observed that females will one day have their sores covered with pus, and probably on the next day covered with blood. In fact, the menstrual ulcer is of very common occurrence

You must wash these sores with liq. calcis and calomel, give to the patient the mist. ferr. c̄ myrrh. and pil. hydr. submur. comp., an ounce and a half of the former twice or three times a-day, and five grains of the latter every night at bed-time. These medicines will generally succeed in improving the state of the constitution, by restoring the defective secretions.

The next ulcers that I shall describe are those which arise from *varicose veins;* and here I shall detain you for a few moments, as the subject is one of some importance. The veins in different parts of the body often become varicose, but those of the lower extremities by far the most frequently so. This condition of the vessels may arise from a variety of causes; but the more immediate one appears to be either a thickening of the valves, so that they are incapable of approximating, or a rupture of the valves: in either case the effects will be the same—the blood pressing in one uninterrupted column—the veins become distended and serpentine, and the valves widely separated from each other—the arteries, by their powerful attempts to return the blood to the part, soon excite inflammation; and ulceration quickly supervenes. What are the common effects produced here by the first desquamation of the cuticle? Why the whole surface covering the diseased veins is formed into a crust, under which a quantity of serum is secreted. The first thing to be attended to in these cases is the recumbent posture: in fact, this position is indispensable; you can do nothing without it. Lint wetted by the mercurial wash should be laid on the ulcers—oiled silk over these, and then the limb should be well and regularly bandaged, beginning at the foot. The bandage allows the valves to recover their lost action, and consequently will be found to be highly useful. Another great benefit is derived in these cases from opening the veins; indeed, they are so distended, that they may more properly be termed lakes than rivulets. If you do not open the vessels, you will find considerable difficulty in the progress of cure. The best plan that you can adopt is to puncture them by means of a lancet, twice in the course of every week as long as you think they require it; let the bandage be afterwards applied, and the parts kept wet by means of evaporating lotion. No danger whatever

attends the opening of these veins, and very great relief will be afforded by it. If the punctures, however, at any time should not unite, but fret into ulcers, you must apply to them the liq. calcis and calomel. It often happens that persons who, for any length of time, have had the veins of their lower extremities in a varicose state, will find at night a great quantity of blood in their shoes; the crust before alluded to, coming off, is the cause of the hæmorrhage. Upon being called to a patient so situated, you put him in the recumbent posture, apply a bandage, wet the part constantly, either with the spirit wash or cold water, and in all probability you will soon get rid of the disease altogether.

Pregnancy is a frequent cause of varicose veins; so also is obesity.

It was formerly the practice, when the veins were in a varicose state, to tie and divide them. This plan is still pursued by many surgeons; but it is one, Gentlemen, that I have deprecated in my Lectures in this Theatre for the last eight or nine years: it is bad treatment, very injudicious, and fraught with great danger; therefore, let me exhort you never to sanction it. I have seen this operation prove fatal in two instances in these Hospitals; therefore I was induced to say that it did not succeed, and have for years spoken against it. A gentleman of Nottingham informed me, that he had tied the vena saphena, for a varicose state of the veins of the leg in a young farmer, in other respects healthy, and the operation proved fatal. The same lamentable catastrophe occurred to a most respectable practitioner at Brentford; and both these gentlemen told me, that they would not again perform the operation for the world. If I were to tell you all the cases in which I have known it terminate fatally, I should recount at least a dozen. Another *overwhelming* objection to the operation is, that when it does not prove fatal, its ultimate effects are perfectly nugatory. If I were asked which of the following operations I would rather have performed upon myself, viz., the saphena major vein, or the femoral artery tied, I certainly should choose the latter. When an artery is tied, the inflammation is *above* the ligature, but in a vein it is below; in this case, the vessel becomes terribly distended, the inflammation uncommonly severe, and either

extensive suppuration, mortification, or death, the result.

Mr. Travers has written an admirable Essay on this subject, which well deserves your attentive perusal.

Ulcers are sometimes occurring in the cellular membrane, forming what we call *chronic carbuncles*.

When the constitution is impaired, from whatever cause, it frequently happens that small swellings will form under the skin. At first they are red; then turn purple; and ultimately slough. The ulcerative process is slow in these cases. A white substance will soon be perceived at the bottom of the sore, and as soon as this comes away, healthy granulations will rapidly form, and the wound become healed. Constitutional treatment, however, in these cases, must not be forgotten; for unless you improve the general health, the ulcers will not get well. You should administer aperients, such as the infusion of senna, Epsom salts, &c., and give alteratives—the Plummer's pill will be found the best. For females, where great general debility has given rise to the formation of these sores, no medicine can equal in power the carbonate of ammonia. I shall have frequent occasion to allude to this. I generally give it in the following form:—

℞ Ammon. Carb. ʒss.
Aq. Menth. Virid. ℥ v ss.
Tinct. Cardam. Comp. ℥ss.
M. ft. Mistura.

If any one medicine improves the nervous system when deranged more than another, it is this. I have often prescribed it for females when in a state of extreme weakness, and its effects are truly astonishing: two table-spoonfuls of the mixture may be taken two or three times a day. If the poultices have not the effect of exciting the granulating process, you may wash the sores with the liq. calcis and calomel lotion, or gently touch their surface with the nitrate of silver.

It not unfrequently happens that the skin in various parts of the body gets into a state of *superficial ulceration*, and without any evident cause. The best applications in these cases are the yellow wash: ungt. hydr. nit., or the ungt. zinci oxydi. The internal use of the oxymuriate of mercury will likewise be found particularly beneficial and salutary; give it in the formula mentioned to you in a previous lecture, viz., in conjunction with tincture of bark; a small quantity of this mixture should be taken in a little white wine,

once or twice daily, according to the age and symptoms. This medicine will be found a very valuable one, when the above-mentioned ulcerations are connected with disease of the mesenteric glands.

There is an ulcer often existing on the face, called *noli me tangere*, which name imports nothing more than that you must not touch it. This disease has never been correctly described; the truth is, that it is an ulceration of the glands or follicles of the nose, those small cavities from which you can squeeze sebaceous matter; the ulceration extending deeply, at last even the cartilages of the nose become destroyed; the plan of treatment to be pursued here is as follows, you must get prepared an ointment according to the following prescription:—

℞ Arsenic Oxyd.
Sulphur Flor. ā ā ʒj
Ungt, Cetacei ℥j
M. fiat unguentum.

You must spread some of this ointment on lint, lay it on the ulcer, and leave it there for twenty-four hours; then remove it; a slough will come away; you dress the ulcer with some simple ointment, and in a short time it will generally heal. If the ulcer is not deep, you may cure this complaint without using the arsenical preparation, by merely painting the surface of the sore with a solution of the nitrate of silver. You must be cautious, however, in your manner of using this application. A gentleman once came to me with an ulcer of the kind of which I am now speaking, and which I painted in the manner described to you, with a camel-hair brush. In the course of the day, when at Lloyd's, he was asked by some friends what was the matter with his nose; for they told him it was quite black; and, in point of fact, it was so. I was not aware, at the time, that a solution of the nitrate of silver would have produced that effect; and I merely mention the circumstance, that you may be on your guard. Deep ulcers, having a malignant aspect, often remain in the faces of old persons, without producing any ill consequences, though, from their appearance, they portend the most direful effects. To such sores, the best application is the lotion, composed of liquor calcis and calomel.

Ulcers frequently form in joints, arising from an inflammation caused by a deposition of the urate of soda. Persons will come to you with many joints open from this cause.

A gentlemen came to me from the country, thus circumstanced. Several of his joints were quite exposed, and the cartilages of some of them absorbed. I found in each of these joints a lump of the urate of soda; therefore, when it is necessary, you increase the openings through the skin, and remove the urate of soda, that being the exciting cause of the disease.

Occasionally, the thickened state of the edges of ulcers impedes the healing process. These edges must be adapted to their surfaces, and this may be done by means of the empl. galban. comp., which will remove the indurated cuticle, and stimulate the parts to action; if this, however, should not succeed, you may use the ungt. hydr. fort., or ungt. lyttæ: or you may, with a lancet, scarify the edges, and this method will often succeed when every other fails.

The edges of sores are sometimes very much *inverted*; constitutional treatment, as well as local, is necessary here. With respect to local, the application of the nitrate of silver to the edges, and the black wash to the surface of the wound, are generally all that will be required; and the constitutional medicines I have so often mentioned to you must be regularly given until the ulcer heals.

Some sores have their edges very much *everted*, and this affection is commonly symptomatic of a cancerous diathesis; the usual method of treatment practised in these hospitals is to poultice such ulcers; to attend particularly to the condition of the general health, until the edges have resumed a natural and healthy state. The admirable mode recommended by Mr. Baynton should be had recourse to, which, by approximating the sides of the wound, and thus facilitating the processes of granulation and cicatrization, will surprisingly contribute towards the completion of the object we have in view.

There was an amputated leg upon the table, which was sent to Sir Astley by a gentleman from Greenwich, and which Sir A. promised the class he would examine and describe at the next Lecture.

Sir Astley likewise exhibited to the students the sciatic nerve of a boy who died in Guy's from tetanus. This nerve was so highly inflamed that it was quite red, and had the appearance of muscle; but, as a correct description of this case will be found under the head "Guy's Hospital," it is unne-

cessary to enlarge upon the subject here.

Sir ASTLEY favoured the gentlemen with another *post mortem* examination: it was that of a boy, who was admitted into the hospital, Oct. 29th, and died last Tuesday. He had, before his death, every symptom of stone, and was consequently sounded, but no stone could be discovered. His bladder, ureters, and one kidney, were now shown to the class by Sir A. The internal surface of the bladder was very extensively ulcerated; one of the ureters much enlarged; and the kidney was a complete mass of disease.

MEDICAL REVIEW.

Transactions of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales.

THE Associated Apothecaries and Surgeon-Apothecaries, after a lapse of ten years from the period of the formation of their society, have at length published the first volume of their Transactions. One half of the volume is occupied by an Introductory Essay, and an Essay on the Education and Duties of the general Practitioner in Medicine and Surgery, by Mr. ALCOCK. These essays are followed by a valuable collection of cases, which have been contributed, not only by members of the association, but by several respectable physicians. The Introductory Essay comprises an account of the origin of the Association; an historical series of documents, illustrating the mode in which they were instrumental in obtaining the Apothecaries' Act, as well as the causes of its defects; and a sketch of the present state of medicine in Great Britain, with some suggestions as to the best mode of improving its several branches.

To the defects of the Apothecaries' Act, and some of the topics discussed in the latter part of the Introductory Essay, we shall have occasion to call the attention of our readers on a future occasion. We shall proceed, therefore, to Mr. ALCOCK's Essay.

An Essay on the Education and Duties of the General Practitioner in Medicine and Surgery. By THOMAS ALCOCK, *Member of the Royal College of Surgeons.*

IT must strike the mind of every enlightened individual, who takes a survey of the present state of the Medical Profession in this country, that, whilst there are to be found in it some who by their talents and intellectual attainments reflect credit on themselves and the profession to which they belong, at the same time the large mass of its members is deplorably ignorant; and this, we feel assured, may in the majority of instances be traced to the defective education they have had the misfortune to receive. Any attempt, there-

fore, to prevent the recurrence of similar mischief in others deserves the highest commendation. The author of the Essay under consideration has taken up this subject: we shall now proceed to examine in what manner he has managed it, by giving a short sketch of the work, and making, *en passant*, such remarks as our limits will allow.

Mr. ALCOCK begins by making some observations on education generally, in which he shows how much the power of investigating disease depends on the previous education, and which he illustrates by two cases that proved fatal, from the nature of the complaint in both being mistaken. After briefly noticing the preparatory education necessary for a medical student, and the views with which he should enter the profession, our author next comes to the subject of Medical Apprenticeship:—

"Great diversity of opinion has prevailed (says Mr. A.), on the value of a medical apprenticeship: some have denounced it as worse than useless, whilst others have been sensible that the time of their apprenticeships was profitably spent, although there might be room for improvement in some respects. Perhaps both may be right. That many individuals wholly neglect the instruction of their apprentices cannot be denied; but fortunately, there are others who consider the education of their apprentices an important trust, and that the apprentice is as justly entitled to the advantage to be derived from that trust, as the master may be to the service of the apprentice. If the subject be investigated, I am persuaded it will generally be found that those unfavourable to apprenticeships have directed their weapons against the *abuse* of, and not against the benefits to be derived from, apprenticeships faithfully and judiciously conducted."

It is against the abuse, meaning by abuse the evil of a law, that our weapon should be directed; and if it can be shown that the evil preponderates over any good that is to be derived from it, then it is bad. Let us consider what is the object to be attained by compelling an individual to serve an apprenticeship: It is to enable him to acquire a certain quantum of information, and if it can be acquired in less than the time of the apprenticeship, no matter. The very principle on which apprenticeships are founded is bad; it proceeds on the supposition that every one comes to the profession with the mind cultivated alike, and therefore the same time is required of all. By compelling individuals to serve a certain time as apprentices, many persons who may possess the requisite talents, but are unwilling, and perhaps unable, from many causes, to serve apprenticeships, are prevented from joining the profession; and thus a positive evil may be inflicted by keep-

ing men from joining it who might be useful to society.

It may be said in favour of the system of apprenticeships, that it is, to a certain degree, security against the profession being incumbered with ignorant men; for if persons are obliged to serve five years before they are allowed to practise it, they must know something of its elements and principles. But, we ask, can this security be obtained in any other mode, without incurring the evil attendant on apprenticeships? Undoubtedly so, by *strictness and publicity of the examinations*, which persons should be required to undergo before they are allowed to practise.

As an apprenticeship of five years is required by the law, of every one, before he can practise as an apothecary, Mr. A. proceeds to inquire in what manner it may be most advantageously spent; recommending, however, the master, before he takes an apprentice, to inquire into his attainments.

The acquirements of pupils on entering their apprenticeships must in general be very slight; the manner of educating youth, and the early age at which most enter the profession, preclude the possibility of their having made any great advances in knowledge. On the first of these causes, our author makes some judicious remarks; he regrets, as all who feel an interest in the subject must do, that in the present mode of school tuition, the great end of education is entirely overlooked: we think, however, that the advice our author gives to masters will not be attended to; it must be recollected that in almost every case an apothecary receives a premium, more or less, as may be agreed on, from each apprentice he takes. The business a pupil has to perform, during his apprenticeship, is to dispense medicine, dress wounds, and occasionally to visit patients: it will vary according to the situation in which he may be placed, but is seldom such as to require a great quantity of skill or talent. The case, then, is this, a master has no inducement to correct any wrong view which a youth may have taken of the profession, nor to examine into his attainment, but has a direct interest in taking him as he may be, merely for the sake of the money. It may be said that this is an exaggerated view; we hope it is, but we know from observation what the case is at present, and from the laws of human nature what the case always must be, under the present circumstances.

The pupil having entered on the period of his apprenticeship, Mr. ALCOCK states what the conduct of the master towards the pupil should be, and the knowledge of those things necessary for the pupil to acquire.

"The period of apprenticeship (says Mr. A.) ought to be characterized by kind and conciliating conduct in the teachers,

and by attention and diligence in the pupil, who must be able to give up pleasure for duty. No opportunity of conveying instructions should be lost, and the habit of daily examining the progress of the pupil will contribute more to his advancement than many are aware of."—Page 13.

The names of the medicines in the shop must be first learned by the pupil; the keeping of a meteorological register, and the making of the instruments required for the purpose, are recommended to the pupil as agreeable and useful exercises; our author's remarks on the care required in dispensing of medicines, deserve the utmost attention.

"In compounding medicines, the practice of weighing and measuring accurately every article used, whether important or simple, must be insisted on, and be established as a habit. This, with the previous principle, that whatever is done must be well and perfectly performed, and the making of one step easy and familiar before proceeding to the next, will soon render the services of the pupil of some use, under proper superintendence. But the practice of learning young and inexperienced pupils to compound medicines without superintendence, cannot be too severely censured; even fatal mistakes have been the consequence of this unjustifiable process."—Page 14.

These, together with many other useful directions respecting the dispensing of medicines, cannot be too strictly attended to by the pupil, as the lives of patients in many cases depend on the accuracy with which their remedies are prepared.

The arrangements for the treatment of accidents, and the making of post mortem examinations, are described by our author with much minuteness; and the carrying them into effect should devolve upon the student.

Besides a mere knowledge of pharmacy, the pupil should make himself acquainted with the dressing of wounds and ulcers, and the simpler operations in surgery. If the opportunities for opening bodies be frequent, the master should, from time to time, teach his apprentice the different parts of the body. These are the professional points that a pupil is expected to attend to during his apprenticeship. His general education, Mr. A. says, should not be neglected; that is to say, he should acquire a knowledge of certain extra-professional subjects, such as "the classical and general literature, French, drawing and modelling, natural history, natural philosophy, chemistry, arts and manufactures, when opportunity may occur."

Here, we think, are too many distinct branches of knowledge mentioned to be studied according to the principle more than once laid down in this Essay, *viz.*, that whatever work is done, let it be done well.

There is scarcely any science, a knowledge of which would not be of use to a person in our profession; but it is utterly impossible for any one to be acquainted with all, and at the same time study: this question then comes, In making the selection, which are the most useful? This is not so easily determined, as the pursuits of different branches of the profession by different individuals, and the various tastes of men, will alter the relative value of knowledge; so that what may be highly useful to our profession, may be less so to another. A certain quantum of classical and mathematical knowledge will be of service to all; and though we know that an undue importance has been attached to the former, yet in the present state of society, whilst the prejudice remains so strong in its favour, we think it proper to be acquired; and if of use to any, it will be to members of our profession, as almost all the terms used by us are derived from the Greek; and besides, much valuable information is to be found amongst the Greek and Latin authors, particularly the latter, which has not been translated; therefore, we think Mr. Alcock has laid less stress on classical learning than he ought.

We now come to an important era in the pupil's professional career:—the expiration of his apprenticeship, and his arrival in London, for the purpose of prosecuting his studies.

Before, however, determining on the plan of study the student should pursue, it will be necessary to ascertain the length of time he intends remaining in town. This must be regulated by two or three circumstances: the opportunities he has had during his apprenticeship; the state of his finances; and the degree of attention with which he may follow his studies.

On this subject our author says: "To the student whose apprenticeship has been well conducted, and whose mind is well prepared for the task, I conceive that the most essential medical and surgical studies may be comprised in one year; but I am far from recommending so limited a course of studies."—Page 37.

The plan which Mr. A. recommends the student to adopt, is to commence with his anatomy; he says:—

"I advise, therefore, the student to commence his anatomy with all his zeal, and to spare neither labour nor perseverance till he acquires a knowledge of the natural structure of the human body. This cannot be done by lectures or demonstrations alone, however diligently they may be attended; he must dissect for himself. Yet there is one step preparatory to dissection itself, without which it will not avail, and that is a correct and ready knowledge of the bones."—Page 39.

A knowledge of the bones is strenuously recommended before a student begins to dissect; and in the acquisition of this, Mr. A. says, that he will be greatly assisted by making careful drawings of the separate bones: after he has made himself perfect master of osteology, he is then to dissect for the muscles, which, with a knowledge of the bones, will be easily learnt. The connexion of the muscles should be particularly attended to.

Our author says, respecting ligaments, "The same subject which furnishes the dissection of the muscles, will also serve for the study of the ligaments and joints, which should be dwelt on with the same zeal and perseverance as the bones and muscles, making every part clearly and perfectly understood before proceeding to the next."—Page 42.

After the student is well grounded in the knowledge of the bones, muscles, ligaments, and joints, he may proceed to the study of the different viscera, and from these to the arteries. Of this part of the dissection, Mr. A. says, "I would entreat the student to be deeply impressed as to the importance, nay, as to the indispensable necessity, of an accurate and complete knowledge of the arteries, and to acquire this knowledge as he values his reputation as a surgeon, the welfare and lives of those committed to his care and skill, or, though last not least, the approbation of his own mind. In many cases of wounds and accidents, the life of the patient must be saved by the skill of the surgeon, or be sacrificed by his ignorance."—Page 43.

After the arteries, a young subject should be dissected for nerves. The veins should next be studied; and our author recommends that those of the neck should be once dissected with the vessels injected with coloured injection.

"The learning of the lymphatics, of the viscera, of the organs of sense, &c. &c., will be rendered perfectly easy by the severer studies which have preceded. If time permit, these organs may be prepared by the student, but should not be undertaken until the previous dissections have been fairly performed. Some of the organs of sense, or the eye and ear, may be prepared as an amusement, after the more arduous study of the day has been completed.

"The general arrangemer for the first season will be cor fined to

"Anatomy and physiology the chief object.

"Natural philosophy, as recreation.

"For twenty-nine weeks the day-work will stand:

"For practical dissection, and making studies from dissected parts, four hours.

"For attendance on anatomical demonstration, one hour.

"For anatomical lectures, one hour and a half.

"For reading, arranging tables, &c., two hours and a half."—P. 40.

This, then, is the manner in which the first season is to be spent, according to Mr. Alcock's plan, by those who intend remaining in town two years or more.

At the close of the first season, the student is recommended to take such a survey of the useful and ornamental arts as his time shall permit; if his health be injured, to go into the country; and, lastly, to pay attention to the acquisition of general knowledge.

After the summer vacation is past, the student returns to town to prosecute his studies afresh. He will then have to attend lectures on chemistry, materia medica, theory and practice of physic, surgery, and if he choose, midwifery. Our Author, speaking of lectures on the Practice of Physic, says, that those delivered by Dr. Armstrong on this subject, "go far to reduce the theory and practice of physic to a demonstrative science, and to substitute accurate observation in the place of vague hypothesis; and if the minds of the pupils be duly prepared, by adequate elementary education, to profit by these excellent lessons, which contain the results of Dr. Armstrong's unpublished practice, the benefits they are designed to diffuse cannot fail to be realized."—Page 58.

We can bear testimony to the truth of these remarks; we have heard Dr. Armstrong's lectures, as well as those of other lecturers on the same subject, and, therefore, are able to judge of their comparative merit: the superiority of Dr. Armstrong's lectures consists in the improved pathological views contained in them; views which are the result of a very extensive and accurate observation; the appearances to be met with on examination after death, of the diseases which are treated of in these lectures, are also given with a greater degree of minuteness than by any other lecturer we have heard.

A portion of every day should also be devoted by the student, this season, to hospital practice, and his anatomy; and "it may not be amiss (says Mr. A.) to recapitulate the employment proposed for the second season.

"Four hours, three times a week, for the lectures on chemistry, materia medica, &c., which amount to two hours a day. Dissection, one hour and a half; anatomical lecture, one hour; medical and surgical practice, two hours; for reading, writing, and meditation, two hours and a half:—making, in the whole, nine hours a-day."—Page 65.

The student is recommended, in the summer vacation, to recruit his health by going into the country; but, previously to this, is advised to visit and examine the principal hospitals, and the various collections relating to natural

history and art. During the summer, his anatomical acquirements must also be sedulously preserved.

The third season is chiefly to be spent in the investigation of diseases; and for the purpose of assisting the student, our author has given two tables, containing an enumeration of the circumstances to be attended to in investigating the diseases of adults and children.

"The plan (says Mr. A.) which I have adopted has been, first, to learn, as far as the patient or friends could inform me, the history of the disease, from its commencement to the time of observation; secondly, to examine carefully the present state of the patient; and if any doubt remained in my mind respecting the disease, to retrace the examination of each organ that appeared to have any share in the malady, to the period of the first deviation from health." —Page 80.

Annexed to the first Table, are some questions which form the reasonings and induction on the disease that has been investigated. The importance of following a plan of this kind cannot be too strongly pointed out. To follow it in many cases will require great labour; but this will be amply repaid in the end by the facility that the person who adopts it will acquire in the diagnosis and treatment of disease.

Immediately after Table I. follows a *rationale* of each circumstance mentioned in it. This, however, we would not recommend the student to read till he had first written one out for himself, which he should compare with that given by our author.

"It may not be," says Mr. A., "irrelevant to recapitulate the studies proposed subsequently to the termination of a medical and surgical apprenticeship.

"First Season—Anatomy, &c.

"Second Season—Anatomy continued, with the usual course of medical and surgical studies.

"Third Season—The strict investigation of disease by clinical observation and pathological anatomy."—Page 101.

After this course of studies, the student may present himself for examination without fear of the result.

The remainder of this Essay is taken up in considering the artificial division of the Medical Profession, the Apothecaries' Act, the present mode of remunerating the general practitioner, and a comparison between his education and that of the Surgeon and Physician. Ere long we shall bring these subjects under the consideration of our readers; and, therefore, shall not make any remarks on them at present.

Our opinion of this paper is, that it contains much valuable matter—matter that will be instructive both to the stu-

dent and the practitioner. The observations to be met with in different parts of the work on various diseases, delighted us so much, that we almost regretted they were so short. The paper, however, is not without its defects. There is a want of clearness of arrangement; of that *lucidus ordo* throughout the whole, which is so particularly desirable in all didactic writings. Some of the stories which the writer introduces are needlessly prolix, and his illustrations are not always felicitous. We shall be glad, however, to see this Essay reprinted in a form which will render it more generally accessible to every branch of the profession.

GUY'S HOSPITAL,

Nov. 19th.

Charles G., æt. 15, sailor, was admitted into Accident Ward, Nov. 12th, with a longitudinal fracture of the left patella, and an extensive wound on the back part of the thigh and leg, of the same side. The boy, previously to being brought to the hospital, had been carried to a surgeon at Woolwich, who applied ten or eleven sutures to the wound. Knee-joint swollen, and of a livid appearance. Straps of adhesive plaster were put to the wound; and the leg was placed on a pillow, in a flexed position. Cloths wet with the spirit wash ordered to be kept to the joint. The joint too much swollen to enable the fractured portions of the patella to be distinctly felt.

On Saturday, the 15th inst., the knee was considerably swollen, and appeared as if disposed to slough; the adhesive plasters, which had been applied on the day of the accident, were taken off, the sutures from the wound, to the number of fifteen, were removed, and the part was enveloped in a linseed-meal poultice; he rested well that night, and on the next day was pretty easy, with the exception of a darting pricking pain at times in the affected knee. His bowels were, during this time, regular, open once a-day. On the Monday, Nov. 17, he felt just the same as on the two preceding days, till about 5 o'clock in the evening, when symptoms of tetanus came on. Monday, 17. Five, p. m.—Knee very much swollen, enveloped in a linseed-meal poultice; darting pains in the part, drawing up of the leg; pulse 120; jaw nearly locked, so much so that he cannot put out his tongue; bowels have not been open for the day; has taken some castor oil; difficulty of swallowing.

In a short time after this, convulsions of the muscles of the face and neck came on; opium and ammonia in large doses, together with other remedies, were administered; turpentine was applied to the wound, but the symptoms grew worse, and at 3 o'clock

the next morning he expired, complaining, almost to the last, of a pricking pain in the knee. Before his death the castor oil operated.

In the account of this case, one important circumstance has not been stated, *viz.*, that ever since the accident he was obliged to have his water daily drawn off by the catheter, as he could not void it himself.

Inspectio cadaveris.

The body was examined thirty hours after death, by Mr. Key, in the presence of several pupils.

External Appearances—Slight extravasation under the skin in different parts of the body; left knee a little larger than the other, but of a pale colour.

Head—Tunics natural; brain of the usual firmness; very little water in the ventricles; extravasation on the left corpus striatum; marked difference between the two thalami nervorum opticorum, disorganization of the left having evidently commenced; plexus choroides red.

Spinal Marrow—Centre of the cord more soft than natural; nothing else remarkable was observed.

After we quitted the room, the *chest* and *abdomen* were examined. With very great difficulty we have collected the following particulars:

Chest—Lungs of a livid appearance externally, internally of a bright red colour, and when cut into, blood oozed out from the surface of the divided parts. Pleuræ, very vascular; no adhesion of the lungs to the pleura; heart, redder than natural; aorta, and pulmonary arteries, full of uncoagulated blood; bronchiæ filled with a frothy mucus, of a red tinge.

Abdomen—Liver healthy, no inflammatory appearance in any of the viscera, excepting the bladder, the mucous membrane of which was highly inflamed.

The anterior surface of the spine was examined, but nothing remarkable observed.

The sciatic nerve was traced from the upper part of the thigh down to its division; the lower part was very red; suppuration of the wound had taken place.

The anterior part of the knee joint was dissected. Very considerable extravasation of dark-coloured blood; patella fractured longitudinally.

J. W., aged 12, was admitted into this Hospital, to-day, Nov. 21, with a severe injury of the left knee joint. Says that he was holding the candle to a farrier, this morning, who was shoeing a horse, when the animal kicked at him, and struck him on the knee. On examination, it is found that there is an oblique fracture of the condyle of the left os femoris; the part is swollen and tense; there is a very great projection on the outer and lower part of the thigh, and a depression in the same place on the inner side. The obli-

quity of the fracture is very considerable, and the bones are very much displaced; reduction has been attempted, but in vain; and Sir Astley Cooper has recommended extension to be kept up by means of Boyer's splints, or the one mentioned in his work, and which he advises to be used in such cases. The limb is not painful, except when moved; it is placed in an extended position; the patient has taken a grain of opium, together with some antimony, which it is expected will tend to relax the muscles; skin is very hot; he is thirsty, and his pulse is 128.

Friday, Nov. 21. At half-past one o'clock the operating theatre was crowded to excess, in consequence of its having been stated on the preceding Tuesday that some experiments were to be tried on a dog this day, for the purpose of ascertaining whether liquids could be put into the stomach and removed from it by means of an instrument, which had been lately invented by Mr. Reed, of Hosmonden Lane, Kent.

Prior, however, to the making of the experiment, a middle-sized steatomatous tumour was removed from a female, just below the inferior angle of the left scapula.

At two o'clock precisely, a dog was placed on the table, its legs and body being secured by two or three of the pupils, an iron pestle was put into its mouth, to keep the jaw separated; and then a drachm of opium, dissolved in four ounces of water, was poured into the stomach. After this, the pestle was removed, and the dog left free on the table.

In the space of twenty minutes the dog manifested a disposition to vomit, which was immediately checked by pressing the finger against the œsophagus. The opium, however, had no very sensible effect on the dog till the expiration of thirty minutes, when the dog was unable to stand upright.

When the opium was administered, the dog's pulse was 120. In seven minutes after, it became 110, and gradually sunk to 90. which was the lowest point.

At the expiration of *thirty-three minutes* from the time the opium was given, the stomach was evacuated of its contents, and washed out by means of the instrument, a description of which we shall now give.

The instrument consists of a brass syringe, capable of holding three ounces, with a tube proceeding from an inch above the mouth, at nearly right angles to it; by this contrivance the syringe has two distinct outlets for the attachment of two tubes. The manner of using it is as follows: when any liquid is to be thrown into the stomach, the mouth of the syringe is put into the vessel containing it, and a long tube, composed of elastic gum or leather, with a joint in the

middle, previously put into the stomach, is attached to the lateral opening; and, when the piston is raised, the fluid is received into the cylinder from the vessel, which is prevented passing back by means of a spherical valve in the mouth; when the piston is pressed down, the fluid passes, by means of the tube attached to the lateral opening, into the stomach, and thus any quantity of fluid may be injected into it. On the contrary, when it is wanted to empty the stomach of any liquid, all that it is necessary to do is to change the position of the mouth of the syringe: the tube in the stomach is very long, and, as stated above, has a joint in the middle; the tube must be disjointed, and that part of the tube in the stomach to be attached to the extreme mouth and the other part to the lateral mouth; thus when the piston is raised, the fluid is taken from the stomach into the cylinder in the same manner as it was before taken from the basin; and when the piston is forced down, the valve in the mouth prevents the fluid from again entering the stomach, and it escapes by the lateral tube; in this tube there is also a valve, but its action is different to the one in the mouth; this valve *closes* when the piston is *raised*, and *opens* when the piston is forced down; the other, on the contrary, *opens* when the piston is *raised*, and *closes* when it is *forced* down. Near the top of the cylinder is a small tube for the admission of air, which enables it to be worked more easily. The instrument succeeded very well in the dog, which appeared to be little worse for the experiment. Mr. Reed was in the theatre during the whole of the time, and superintended the use of the instrument; on quitting, he received the unanimous applause of those present.

Sir Astley Cooper, just after the experiment had been tried, looking at what had been removed from the stomach, smiled, and said that the instrument would do well for an alderman after a city feast. —(*A laugh.*)

ST. GEORGE'S HOSPITAL.

J. W. was brought into this hospital about eight o'clock on Tuesday evening, in a state of insensibility, with a fracture of the skull and thigh, by a fall from a horse. Previously to his arrival here, he had been bled; at this time he was suffering from compression and concussion. A portion of the right parietal bone, and a portion also of the frontal bone, were depressed. These Mr. Brodie extracted, after the application of the trephine. The boy was much relieved, and able to answer a few questions. The dura mater protruded through the apertures made by the trephine, and under it appeared to be an extravasation of blood. His bowels were emptied by two doses of

croton oil, (a drop each dose,) which acted very powerfully, without producing sickness or griping. The pupils natural.

Wednesday. No change for the better; limbs not paralytic; pulse exceedingly high.

Thursday. Rather better in the morning; answered a few questions rationally; in the afternoon much worse; slight subsultus tendinum; died about twelve o'clock.

Appearances on dissection.—On removing the scalp from the pericranium, a considerable effusion of blood was found between them. The fracture ran from the edge of the parietal bone in junction with the frontal, and extended across the frontal to the superciliary ridge, and down the temporal bone to the base of the skull. The internal surface of the *dura mater*, on the opposite side, near the temporal bone, for a considerable extent, was lined with coagulated blood; no appearance of inflammation either in the brain or its membranes; the two lateral ventricles empty.

LECTURE XIV.

THE subject of this Evening's Lecture will be

GANGRENE.

Having traced Inflammation through its adhesive, suppurative, and ulcerative stages, I shall now proceed to consider it in its most destructive form, namely, when it exists in such excess as to produce gangrene. We find that inflammation, when it is extremely active, occasions a destruction of vital power. At other times, when there is a less degree of inflammatory action, but where the powers of the part are feeble, the life of the part will also be destroyed; so that gangrene is produced either by an excess of inflammatory action, where the powers are natural, or by a less degree of inflammatory action, where the powers of the part are feeble. Gangrene may be considered as a partial death. This is its definition: the death of one part of the body, while the other parts are alive.

The symptoms of gangrene differ according to the manner in which it is produced. When gangrene is the result of high and active inflammation, the pain attending its production is exceedingly severe; the inflammation is very extensive; there is generally a blush to a considerable extent; and there is generally, though not always, a considerable degree of swelling. The secretion from any sore which may exist ceases, for the skin no longer perspires. The surface of the skin becomes of a dark colour; it is said to become purple, but it

is rather of a brownish tinge. The cuticle is raised; a vesication is produced, and when this breaks, it is found to contain a bloody serum. When this serum is discharged, the skin assumes the gangrenous appearance, and becomes perfectly insensible. The vesications extend to parts beyond the ulceration; thus in sores of the leg we frequently see a large portion of the skin giving way, and the gangrenous vesications extending beyond the ulcerated surface. The constitution suffers considerable derangement from gangrene; there is a high degree of irritative fever, and the pulse is often exceedingly quick. The pulse is generally said to become slow when gangrene takes place, but I have never observed this. I have indeed occasionally remarked but a few beats in a minute, because it is very frequently intermittent. Still the pulse is quick, though occasionally intermittent. It is said also to become soft, but I should not say that this is the character of the pulse in gangrene. It is quick, very small and thready, and generally irregular. Gangrene seldom occurs without delirium, and it is attended also with vomiting and hiccough. Hiccough, indeed, is the characteristic sign of gangrene, and it takes place though the gangrene may be situate in a part very distant from the stomach; as for example, in the toe. The fact is, that when gangrene arises from a diseased state of the constitution, the stomach is extremely deranged, and this derangement of the stomach is followed by a spasmodic contraction of the diaphragm, producing hiccough. This symptom does not arise from any alteration in the action of the diaphragm, but from its sympathy with the deranged state of the stomach. If you wish to correct hiccough, you may arrest it for a time by giving some slight stimulus, or even by adopting opposite means. Thus a glass of cold water will suspend it for a considerable time.

Such are the symptoms when gangrene is the result of excessive action. But gangrene is sometimes the effect of a low degree of inflammation; as when it is produced by the application of cold. When a great degree of cold has been applied to any part for a considerable time, the part will become benumbed; that is, its nervous powers will be diminished: and when it is thus enfeebled, it will be unable to bear a very slight degree of

supervening inflammation, so that gangrene will be produced, and the destruction of its life will follow. In this climate, however, destruction of the life of the part does not in general immediately follow. A person will come to the hospitals with his feet benumbed; he may have been wandering about the streets, unable to find a place of refuge, until he becomes, from this cause, incapable of walking. Great care must be taken in these cases not to apply heat very suddenly; even the common heat of the bed frequently occasions inflammation, which is extremely liable to proceed to gangrene, in consequence of the diminished nervous influence of the part. I knew a gentleman of the first consequence in this country, and whose death occasioned perhaps as much regret as that of any one who has died for many years, who lost his life from an act of imprudence. He had been out shooting, and had exposed himself to severe cold; and finding his feet benumbed on his return, he immediately put them into warm water. The consequence was that a gangrene took place, of which, notwithstanding all the care that could be taken of him, he died. In this climate it generally happens that inflammation succeeds the application of cold after an interval of two or three days. By the use of some slight means of treatment this inflammation is generally suspended, and it is by the repetition of the inflammation rather than by its severity that the powers of the part become at last exhausted. In colder climates than our own the part exposed to cold becomes white, and the suspended circulation is commonly restored by rubbing the part with snow. If it be not very carefully treated however, inflammation and sloughing is apt to come on. If a part be completely frozen, inflammation frequently ensues in a short time, and after continuing for a few hours, is followed by a destruction of the vital power.

These are the symptoms which we observe in cases where gangrene is the result either of a high degree of inflammatory action, or of diminished power. When gangrene is produced by either of these causes, the process of separation soon commences. This process is one of the most curious operations of nature in the human body. There is nothing more extraordinary to my mind than the power which nature possesses of separating even large members without any danger from hæmorrhage,

or the smallest jeopardy to life. Thus we see a limb of considerable size separate without in the slightest degree endangering the life of the patient. There is an instance of this at the present time, in the other Hospital, in a case of popliteal aneurism, which will afford you an opportunity of judging of this process of separation for yourselves. The first appearance which we observe after the destruction of the life of any part, is a white line, which nature forms for the separation of the dead from the living parts. For this white line we anxiously look, since it is the barrier which nature sets up between the dead and the living parts, and it becomes a criterion of the cessation of the gangrenous disposition. At this white line the cuticle is raised. This elevation of the cuticle is a vesication, which forms a line of circumvallation around the gangrene. When the cuticle becomes separated, as it will in two or three days, we find a chasm beneath it, produced by the absorption of the living skin in contact with the dead. The living skin is taken up by the absorbent vessels into the constitution, and in this manner the living parts are separated from the dead by a process of nature. If we were to reason *à priori* on this subject, it might be expected that the absorbent vessels would rather remove the dead portion of skin in contact with the living; but this is not the case. The absorbent vessels act on the living parts, but not on the dead; nor is the dead skin absorbed after the time when granulations have formed, but it becomes loose, and ceases to attach to the surrounding parts; the chasm formed by the absorbent vessels affording an opportunity for the separation.

The next part which begins to separate is the cellular tissue immediately under the skin. Gangrene proceeds to much greater extent in the cellular tissue than in the surrounding skin, because the cellular membrane is a part of weaker living powers. It is for this reason that a sloughing disposition in sores extending to the cellular membrane is so dangerous. A small chancre beginning in the pudendum of the female, and sometimes in the penis, will frequently occasion the destruction of life in the part. Some persons have absurdly supposed that these sloughing sores are not chancres, because they have not the common venereal character. But how does this happen? If a chancre forms in the pudendum of an irritable female, and has a

sloughing disposition, it extends into the cellular tissue, inflames to a high degree, and produces gangrene. In this manner the character of the chancre becomes destroyed. There is at this time an unfortunate female in the other Hospital, who has lost a considerable portion of the external organs of generation, in consequence of a sloughing chancre. The hospitals teem with such cases; and indeed this deplorable result is always to be expected when a sloughing chancre extends into the cellular tissue, a part naturally weak, and rendered weaker in these persons from their irritability and mode of life.

The next part which separates is muscle. Muscles separate nearly opposite the edge of the skin. Wherever the skin separates, the muscle gives way; a line of separation is formed, and the living portion of muscle is taken away from the dead. This is not the case with tendons; these, like the cellular tissue, do not separate opposite the skin, but at a considerable distance from the part at which the sloughing takes place. If a tendon is exposed in the palm of the hand, by a sloughing ulcer, it separates at the wrist, for it is incapable of resisting the inflammation, in consequence of its weak living powers, and separates therefore at the part where it joins the muscle.

The nerves separate, like muscles, opposite the skin. But the most extraordinary instance of the process of separation is that which takes place with respect to the larger blood-vessels. What would be the result, if you were to separate with the knife the anterior and posterior tibial arteries, without placing a tourniquet on the limb? The person would die in a few minutes. Yet nature cuts through these vessels, and frequently divides the arteries I have mentioned, without a drop of blood issuing from the limb. This happens in the following manner: The blood in the vessels of the dead part becomes coagulated; the coagulum, however, does not confine itself to the dead part, but extends to the living vessels which join it, and is, in this manner, glued to the inner side of the artery, so that the vessels are, as it were, hermetically sealed; and not a drop of blood can escape by the side of the coagulum. The same thing takes place in veins, the coagulum adhering to the inner side of the living vein, so that no blood can escape. If you amputate a limb at a con-

siderable distance from the part at which gangrene has commenced, you will still find the vessels sealed. The first amputation which I ever performed, was in the case of a gentleman who had a gangrenous ulcer near the head of the tibia. In this case it was necessary to amputate above the knee, as sufficient skin would not have been left if the amputation had been performed below. When I loosened the tourniquet, I was surprised to find no femoral artery. On a closer examination, I found that the inner side of the femoral artery was completely plugged up, and sealed by the coagulum, which had extended at least six inches above the place at which the gangrene had occurred. It appears, therefore, that the artery is not only sealed at the place at which nature cuts through it, but at a considerable distance above it, in order to provide against the danger which would arise from a separation of the coagulum.

Bones, at last, become separated; but this process is very slow, and it is a long time before they exfoliate, loaded as they are with phosphate of lime. Hence we are often under the necessity of taking away bones, when the process of separation is in other respects complete. I am anxious, whenever I have an opportunity in these Lectures, to refer you to cases actually existing in the Hospitals; and you cannot have a better opportunity of observing the process of nature with respect to the separation of bones, than in the case of popliteal aneurism, to which I have before directed your attention. This man underwent the operation for aneurism in the other Hospital. The aneurismal bag had been loaded with fluid blood for a length of time; the process of gangrene commenced at the ancle; all the soft parts were absorbed, and there is nothing now remaining but a portion of bone, which will also separate, if we permit it to do so. The saw would quicken the process, but it is unnecessary, for the bone will separate by the efforts of nature alone. I knew a person in the county from which I came (Norfolk), whose leg entirely separated by the process of gangrene alone. In the foot this very commonly takes place; in the calf of the leg it is not common, but below the calf, it frequently occurs. I attended one of the king's messengers, some time ago, who came from Germany, with a

gangrene in the foot. The foot separated at the tarsus, and the whole process went on without any surgical operation, and with nothing but the aid of the simplest applications.

Gangrene is frequently the effect of a debilitated state of the constitution. Thus, if a man have been confined by long-continued fever, the nates are apt to slough and become gangrenous, in consequence of the imperfect circulation, arising from the position in which he has been forced to remain. Some fevers have a greater tendency than others to produce gangrene; as for example, scarlatina. In slight cases of scarlatina, the most horrible effects will sometimes arise from gangrene. The tonsils will slough to a great extent: parts of the Eustachian tube, and even the tympanum will separate, and large portions of bone exfoliate. The worst effects of this kind are observed in those cases of scarlatina, where the fever is not the most violent. The measles are very apt to be followed by sloughing, unless great care be taken not to irritate the skin of the chest too much. In this town it sometimes happens, that a large blister applied to the chest of a child labouring under measles occasions a high degree of inflammation, producing gangrene, and endangering the life of the patient. In constitutions of an unfavourable kind, I have often seen the measles produce a slough forming a black aperture in the cheek of the child, through which its food was passed, and life soon destroyed. Mercury, if used to excess, often excites sloughing, from the fever and consequent debility of the constitution which it produces. Whatever, in short, weakens the constitution much, disposes it to the production of gangrene; for the body, when thus debilitated, cannot bear any excess of action. When the application of cold is the cause of gangrene, the effects are produced very much in the same way. The powers of the part to which the cold is applied are diminished, and this diminution of power leads to the destruction of the part, under the first excess of action.

There are some parts of the body naturally constituted feebly; as for example, tendons. When inflammation attacks a tendinous structure, it runs very readily into a state of gangrene. Hence the danger of making incisions into a tendinous structure, which fre-

quently affect the nervous system with the highest degree of irritability, and produce tetanic symptoms. It is not the injury to the nerves which produces tetanus, but the sympathy of the nerves with the injury to the tendon.

It may be stated, as a general principle, that inflammation is the cause of gangrene; gangrene very rarely happens without inflammation; but as there are some exceptions to this general principle, I will mention them. I have seen, in a case of hydrothorax, a small spot in the legs become at once black, without any appearance of inflammation, and extend itself until it occupied a very large surface. Here the total absence of circulation, and not an increased degree of it, occasioned the destruction of life in the part. So we now and then see aneurism producing gangrene. In the case of popliteal aneurism, to which I before adverted, the gangrene is produced, not by the bursting of the aneurismal bag, but by the pressure of the bag on the vessels, occasioning the destruction of life in the limb below. I saw a gentleman a few months ago, who was upon the point of death from the pressure of an aneurism. His foot afterwards became gangrenous. He did not die, however; for a separation of the foot, and part of the leg, took place, and he ultimately recovered.

So much for impeded circulation without inflammation, as a cause which sometimes produces gangrene. The division of a considerable blood-vessel will sometimes produce the same effect. I believe I have already mentioned in the Lectures, the case of a gentleman who was stabbed in the groin by a foreigner, with a dirk or sharp knife. He was stabbed just in the femoral artery; considerable hæmorrhage took place, which was stopped by a ligature on the artery; but the leg afterwards became gangrenous, and it was necessary to perform the operation of amputation. Since I commenced these Lectures, I have seen a most melancholy instance of a gentleman in the prime of life, who died from gangrene, in consequence of an injury to the femoral artery. This gentleman was thrown out of a gig as he was going down a hill, and the wheel of the carriage went over his thigh. When he was taken up, it was found that he had a simple fracture of the femur. Every thing which attention and skill could do for him was

done; but some peculiarities were immediately observed at the time of the accident. The lower part of the leg was quite insensible; it was considerably swelled and hard. After lying in bed for a week, the patient became so restless that he wished to be removed. This was done in the gentlest possible manner. He did not, however, experience the relief which he expected from a change of position, and the swelling was in some degree increased.

I was then sent for; and when I saw him, I was surprised to find that gangrene had already commenced at the knee. This was hardly to be expected from a simple fracture; for it so rarely happens that the femoral artery is injured by a fracture of the thigh-bone, that amongst all the cases of fractured femur which I had seen in the course of my life, I never yet met with an instance in which the artery was injured. However, from the immediate insensibility of the limb at the time of the accident, from its coldness, from the swelling which accompanied it, and also from the pulsation which existed opposite to the fracture, I was led to believe that the femoral artery was torn through. The question then arose whether we should amputate or not. Upon examination, I found the limb emphysematous; the air had extended into the cellular tissue up the thigh to the abdomen, and putrefaction had already commenced. I perceived, therefore, that the patient had but a few hours to live, and that it was useless to put him to the pain of an operation. Upon examination after death, by the medical gentlemen at Rochester, where the patient resided, it was ascertained that the femoral artery was divided. It seems extraordinary, when we contemplate the situation of the thigh-bone, that a fracture of it should not in one case out of ten produce a similar result. A little knowledge of anatomy, however, explains this circumstance. The artery is enclosed in a sheath, which so far protects it, and its elasticity yielding to the pressure of the bone, enables it to escape in a great majority of cases from the occurrence of this accident. The history of gangrene, as far as dissection enables us to judge of it, is this: The excessive action of the part closes the blood-vessels, and the blood contained in them becomes coagulated. This is a curious circumstance, which I ascertained by an ex-

periment made on an animal. It is a well-known fact in physiology, that if a quantity of blood be included in a living vessel between two ligatures, at the distance of two or three inches, this blood remains about three hours before it becomes coagulated. To ascertain whether, if blood were admitted into a dead vessel, from which the air was entirely excluded, it would coagulate as it would in a glass out of the body, I put a ligature on the jugular vein of an animal, and another ligature at a distance of two inches from the first; then cutting through the end of the vein, I brought it externally to the skin, so that it hung out from the wound. Having ascertained that the blood coagulates in three hours and a quarter in a living vessel, I took off the ligature from the pendulous dead vessel, and found that in ten minutes the blood had coagulated as firmly as it would in a vessel into which a person had been bleeding. In a dead blood-vessel, therefore, the blood becomes coagulated just as it would in a vessel out of the body. If you attempt to inject a part after gangrene, the injection will not enter the vessel. There is a specimen on the table (Sir Astley exhibited the specimen) of a gangrenous limb, where you may perceive that the injection has entered only as far as the part at which gangrene has commenced. Such is the state of parts under gangrene. They can never be recovered, because living blood can never again circulate in them.

The subject next in order is the Treatment of Gangrene; but as I intend to occupy a little of your time this evening by a very curious experiment, I shall defer the consideration of that subject to the next Lecture. I have something to say to you, also, Gentlemen, on another subject. In the course of these Lectures I have always considered it my duty to direct your attention to what is going forward in the hospitals, and to illustrate every subject as far as possible, by a reference to cases which are actually under your inspection.

A short time ago, I amputated a limb in the other hospital, in a case of aneurism, which is extremely curious, and to which I am not sure that there has ever been a parallel. Some months ago, a man underwent the operation for aneurism; the femoral artery was tied; shortly after, the pulsation disappeared, and he was

soon after supposed to be cured of the aneurism, and discharged. He returned to his work; but soon after a swelling arose in the ham, without pulsation. The swelling subsided in consequence of rest: but a few weeks ago, while the man was at labour, the swelling returned with great pain, which increased during the time he was in the Hospital; and, as there was no prospect of his recovering a useful limb, amputation was resorted to. In this case I found the femoral artery below the place to which the ligature had been applied was conveying blood. As it was impossible that the femoral artery could be pervious, the blood must have been conveyed by anastomosis. It does now and then happen, that a blood-vessel will arise from the artery just above the ligature, and pass into the artery immediately below the ligature; by which means the circulation is produced. There is a beautiful specimen in the collection, where the brachial artery had been tied, and blood was conveyed by a vessel not more than three inches in length, from the part just above to the part just below the ligature. This now and then occurs after the operation for aneurism, anastomosis happening where it is not usually found, from a short vessel running from one portion of the artery to the other.

The other subject, to which I mean to call your attention, is the experiment which I made on an animal last Friday, in the other Hospital. This experiment, Gentlemen, delighted me; I do not know that I have ever experienced greater pleasure in my life than I felt in going home from the Hospital on that day. With respect to antidotes against the effects of poison, it is well known that they are, in a great degree, useless. It is impossible, for instance, to get rid of arsenic from the stomach by any remedy that can be administered. It is doubtful whether any man ever recovered from the effects of that poison by means of an antidote. So with respect to opium, when it is taken into the stomach in such large quantities that vomiting cannot be excited, the patient cannot be relieved by the exhibition of medicine; for where is the antidote against the effects of opium? A few weeks ago, a nurse in this Hospital died in consequence of having swallowed opium. No relief was administered to her; but can it be said, after what we saw on Friday, that no re-

lief *could* have been administered to her? A short time since, a patient died in the other Hospital, under similar circumstances; the quantity of opium taken being so large, that vomiting could not be excited by any means which were employed. I was myself, on one occasion, called to a young lady, who had taken two ounces of the tincture of opium. It was ten o'clock in the morning when I first saw her; she was then comatose. I tried to excite vomiting, by the sulphate of copper, given in as large doses as I could venture to administer; which I have sometimes known to succeed when all other means have proved ineffectual. It was however unavailing in this case, and I sat by this young lady from ten o'clock in the morning, until eight in the evening, watching the regular process to death, without being able to administer to her the least relief. Let me ask you then, Gentlemen, whether an experiment of this kind is not in the highest degree interesting, and whether we are not infinitely indebted to the man who first suggested the means of administering relief under such afflicting circumstances? I am happy to tell you, that the gentleman to whom we are indebted for this suggestion is now present; that he is ready to have the experiment made upon himself, and that so confident is he of the success with which it may be applied, that he would have no objection, if I could permit it, to take a large quantity of the tincture of opium in your presence this evening. I suggested, however, that a little coloured water would answer all the purposes of illustrating the use of the instrument. The syringe, which was brought to me the other day by a very ingenious man, Mr. Reed of Kent, is entirely a new invention, nor do I think the merit of that individual in the least degree diminished, by what I have since learned. The application of the syringe to the stomach, in cases of poisoning, is due to a gentleman whose name I shall presently mention. Mr. Reed's syringe is a new contrivance, which has been formed upon a principle in hydraulics (first applied, I believe, by Mr. Bramah,) and which is capable of increasing the force of the instrument to the greatest possible degree. To give you an idea of its force: if I were to stand on a piece of wood, and the wood were surrounded by any thing which would prevent the escape of the wa-

ter, the force of the syringe is capable of raising me from the ground. I do not wish to commit myself by any observations on a subject with which I do not pretend to be particularly conversant; but I believe, Gentlemen, the principle is this: When a fluid contained in a vessel, having a large diameter, is thrown into one of very small diameter, the result is, an exceedingly great accumulation of force.

Thus we see that piles which are driven into the beds of rivers, by the force of immense weights acting upon them, are raised by the admission of a very small quantity of water under them, upon the principle which I have just stated. Mr. Reed's syringe is formed upon this principle, and the valves are besides different from any which had been previously employed in similar instruments. With respect to the medical application of the syringe, however, for the purpose of removing poisons from the stomach, we are indebted for it to Mr. Jukes, a Surgeon at Pimlico, who published an account of it in the Medical and Physical Journal for November, 1822, p. 285; and a further account in the same Journal for June, 1823. Mr. Jukes originally employed a gum elastic bottle to be applied to the tube; but the improvement of a syringe was suggested by Mr. Bush, of Frome.

Mr. Jukes now presented himself to the class, and was received with very great applause; but as he discovered some little imperfection in the apparatus, he deferred the experiment for a few days.

MEDICAL REVIEW.

Transactions of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales. Page 424. Burgess and Hill.

It will be impossible for us to review all the papers which this work contains, and at the same time do them justice, by plainly stating their merits and defects; therefore we shall devote the greatest part of this notice to the consideration of a subject treated of in this volume, viz. fracture of the patella. Previously, however, to this, we will just give a sketch of the paper contributed by Dr. James Johnson, on an affection of the pericardium and heart, of not very common occurrence.

Case of Chronic Inflammation and Accretion of the Pericardium to the Heart. By James Johnson, M. D.

The subject of this paper, Mr. Bewley, Dentist, Duke-

street, St. James's, had for several months past been in bad health, and considered by his friends as threatened with pulmonary consumption, when he was visited, in the middle of April, 1821, by Dr. J. JOHNSON and Mr. GOLDING, for a rheumatic affection of the joints, occasional attacks of which he had been seized with during his illness. When these came on, all the symptoms of any pulmonary complaint left him, and returned only when the affection of the joints was removed.

Mr. B. was ordered by his medical attendants to take thirty minims of the vinum seminis colchici thrice a day, to attend to the state of his bowels, and regulate his diet. Under this plan of treatment he was recovering, when he was seized with apoplexy, and hemiplegia of the right side, which all the ordinary modes of treatment failed to relieve, and he died in about a week from the attack. The following were the appearances ascertained on examination after death.

"*Head*—The vessels of the head were gorged with blood, and there was some effusion between the tunica arachnoidea, and pia mater. In making the incision for the centrum ovale, we came to a rent in the right posterior lobe of the cerebrum, containing a clot of blood, about an ounce. The laceration communicated with the lateral ventricle of that side, which was filled with blood, as also the other lateral ventricle, and the third and fourth ventricles.

"*Chest*—The lungs might be pronounced sound. There were adhesions between the pleura costalis and pleura pulmonalis of the right side, and an effusion of a few ounces of serum in the left cavity of the chest. The pericardium and parietes of the heart were so completely accreted together by chronic inflammation, that the scalpel could not separate them without cutting one or other structure. There was no other organic legion to be seen."

Dr. J. says, that he has seen several cases of this kind within the last six or seven years; we exceedingly regret that he has not given such a detailed account of the symptoms of this case, or of the others which came under his notice, as to assist a practitioner who might happen to have a patient labouring under a similar affection in discovering its existence. In reference to our author's quotation, Plura de hoc morbo non addo, &c., we have only to remark that more ought to have been added to render the case of any material use. "Brevis esse laboras, obscurus fis."

We will now proceed to consider the subject of fracture of the patella.

Observations on Fracture of the Patella. By ROBERT PALK MOGRIDGE, *Surgeon, &c.*

Practical Observations on Fractures of the Patella and Olecranum, By THOMAS ALCOCK, *Surgeon, &c.*

Fracture of the patella* is an accident of such common occurrence, so frequently to be met with in the different hospitals, and also in private practice, that it might have been expected, ere this, no point connected with it would be the subject of dispute; quite the contrary, however, is the case; and in the very papers before us, two modes of treatment in a fracture of the patella, diametrically opposed to each other, are recommended for the purpose of effecting the very same object, viz., a close union of the fractured portion of the bone. Before we go any further, let us ascertain, 1st. Whether it be possible that ossific union can be produced; and 2dly, If it can, what are the advantages to be derived from it.

The possibility of ossific union of fracture of the patella was formerly denied by all; and at the present time is even doubted by some, though the fact that it can take place is now pretty well established; we have never seen a case of ossific union, though it has fallen to our lot to see a considerable number of these accidents; yet we have been informed from others, on whose testimony the greatest reliance might be placed, that it has taken place in three or four cases which fell under their care.

* Within the last five weeks, six cases, we believe, of fractured patella have been admitted into Guy's Hospital.

It will be proper now to consider whether there are any advantages to be derived from ossific over those of ligamentous union, as on this will depend the degree of merit to be attached to any mode of treatment, by which ossific union of the fractured ends of the patella may be produced.

Wander-Wiel, Ravaton, Pot, and other writers, among whom might be mentioned Sir Astley Cooper, have maintained that a moderate interspace between the two fragments of a broken patella is conducive to the perfect function of the knee-joint after cure. We cannot assent to this, notwithstanding the authority by which the opinion is supported. An interspace between the portions of a broken patella, tends to weaken the action of the extensors of the leg, and increase the difficulty of progression; consequently, it exposes the person to the liability of falling: hence the number of cases to be met with of persons who having had one patella broken, slip their feet, and fracture the other. Desault, on this subject, says, that he always found the joint the more perfect, the smaller the interspace between the fragments. When they were apart, he always found that the patient could not walk up rising surfaces, or pass over irregular ground, without difficulty.

We shall not make any remarks on the different kinds of fracture of the patella, or the manner in which they are pro-

duced, but confine ourselves to simple transverse fractures of that bone, simply state the indications of cure, and then consider to how great a degree the plans recommended by our authors favour them.

The grand point to be attended to is, to diminish the action of the muscles connected with the patella: these are the vasti (externus and internus, cruræus and the rectus, all of which, excepting the rectus, arise from the thigh-bone, and this takes its origin from the front of the pelvis; then the upper portion of the patella is to be kept close to the lower.—To the position of the body for the purpose of relaxing the muscles, Mr. Mogridge pays no attention. Mr. Alcock on this subject says, "The leg must be brought into a right line with the thigh, and the thigh be raised towards the front of the pelvis, or otherwise the pelvis be brought forward on the thigh."—P. 294.

The extended position of the limb may be maintained by placing a long splint, well padded, on the back of the leg and thigh, and placing the limb on a surface which forms a gradual ascent from the tuberosity of the ischium to the heel. This being done, it remains now to determine what other means ought to be adopted to approximate the edges of the bone. The object of Mr. Mogridge's paper is, to show the advantage of an instrument he has devised for effecting this purpose; and speaking of the force of the muscles connected with the patella, says, "When you reflect on the quantity of muscular power to be overcome, the means for effecting it must of course be very powerful: the screw alone is equal to it; therefore, that I adopted."—P. 287.

Mr. Alcock's views on this subject are very different:—"Let the surgeon observe the force which is necessary to effect the accurate apposition of the bones, and he will find that a force equivalent to a few ounces' weight will suffice, if the relaxed position of the muscles has been well observed."—P. 295.

The instrument employed by Mr. M. presses just above and below the knee. "The parts which press on the knee consist of highly-tempered steel, with a well and hard stuffed cushion underneath each, leather straps covering them above; into these are firmly riveted the upright pieces, through which the screw and guide pass. The method of applying it is by unscrewing the thumb-screw to its extent; then getting portions of the fractured bone between the instrument, apply a splint inside it. On the back of the thigh and leg, buckle the strap around the limb, and splint as light as possible; then, with the thumb-screw, bring the instrument together."—P. 288.

Mr. Alcock thinks that screws and all such compli-

cated apparatus may be dispensed with. "The apparatus for keeping the ends of the bone in apposition may be very simple. The writer has generally used strips of plaster of about an inch in breadth and a foot long, crossing obliquely from the integuments immediately above the patella to the upper and back part of the leg, the patella being within the angle formed by the crossing. A moderate-sized compress has been then placed immediately above the patella, the ends bending downwards on each side. A narrow double-headed flannel bandage has been generally preferred, on account of its greater elasticity than linen or calico. A splint may or may not be placed in the ham, as circumstances require; the bandage should not be so tight as to cause the leg to swell, otherwise the lower part must be also supported. There is an advantage in leaving the patella uncovered, as it enables the surgeon not merely to suppose that the ends of the bone are steadily supported in contact, but to assure himself of the fact, day by day, without disturbing the apparatus."—P. 296.

Mr. Mogridge has given, with his paper, a plate of a limb with his instrument applied to it; Mr. Alcock has not. In the one case, persons will be able to see, without even giving the instrument a trial, the mischievous effect it is likely to produce; in the other, for want of a plate, those who may read Mr. Alcock's description, and have not adopted it, or a plan similar to it, will not have that impression of its merits which it really deserves. We have seen Mr. Alcock's plan adopted, and with the most favourable result. We are continually in the habit of seeing a mode of treatment similar in principle to Mr. Mogridge's pursued, though his exact instrument is not employed; and the pain and inconvenience produced to the patients at the time, together with the issue of the cases, have quite satisfied us of its inexpediency.

The addition of two or three cases, together with a plate, would add greatly to the value of Mr. Alcock's paper.

The Associated Apothecaries have offered premiums (ten guineas each) for two Essays on the following subjects, which must be transmitted to the Secretary or President of the Association, on or before the 1st of May, 1824:

1. "For the best original Essay on the subject of Medical Education, in which the relative importance of the various accessory sciences is ascertained; and the extent to which each separate science or branch of general knowledge should be cultivated, to afford the highest degree of usefulness in the healing art."

2. "For the best experimental Essay on Inflammation. The number, accuracy, and practical importance of the

facts and inductions communicated, will form the basis on which their respective merits will be appreciated."

We repeat, that this volume contains much valuable matter, and we participate in the hope expressed by the Committee, that it is only the first of a series of volumes. We are afraid, however, if we may judge from the extreme deliberation with which all the measures of this Society appear to be taken, that the series will not follow in very rapid succession.

MODE OF PRESERVING HEADS.

The following account, as given by Captain Cruise in his Journal, of the manner in which the New Zealanders preserve heads, may not be altogether uninteresting to our readers. The preserving of heads is very common among those islanders; with us, however, it is extremely rare, few anatomists, in this country, having ever attempted it.

"When the head has been separated from the body, and the whole of the interior of it extracted, it is rolled up in leaves, and put into a kind of oven, made of heated stones, laid in a hole in the ground, and covered over with earth. The temperature is very moderate, and the head is baked or stewed, until all the moisture, which is frequently wiped away, has exuded, after which it is left in a current of air, until perfectly dry."

By this process the features, hair, and teeth, remain as perfect as in life, and keep for a great length of time without showing any symptoms of decay.

Jonah's residence in the whale's belly accounted for on physiological principles, by Dr. Pearson.

PHYSIOLOGICAL facts are never more interesting than when they are found to confirm the great truths of our religion, and to afford a satisfactory explanation of phenomena which infidels have treated with derision, without the necessity of resorting to a miraculous agency. Dr. Pearson, of George-street, Hanover-square, in lecturing a few days ago upon the stomach, observed, that this organ had no power over substances endued with vitality; and that this circumstance accounted for the fact of the prophet Jonah having remained undigested in the stomach of the whale for the space of three days and three nights. Dr. Pearson's discovery is highly important, both in a medical and theological point of view: it furnishes a complete answer to all the objections which have been urged by sceptics against that part of the sacred volume in which this singular adventure is related. How the prophet passed his time in the cavity of the whale's stomach —how far the confinement affected his organs of respiration—in what manner he de-

rived his sustenance, or whether he required any sustenance at all, are all questions of minor importance. The fact of the stomach having no power over vital substances having been once established by Dr. Pearson, the corollary is obvious. The argument may be thus stated:—When Jonah entered the whale's stomach, either he was alive or he was not alive. If he were not alive, the stomach would have had the same power over him as over any other inanimate substance, and the prophet would have been digested in the ordinary way; but he was vomited out alive on the fourth day: consequently he was alive when he entered the stomach. Now, as he was alive when he entered the stomach, and as the stomach has no power over a living substance, it is evident that he must have continued to live. Hence, when the action of vomiting was excited, and he was thrown up on the fourth day, he was deposited on the dry land, probably without any other inconvenience than some trifling derangement of his canonicals. Dr. Pearson deserves the thanks of the pious, as well as the philosophical part of the community, for having explained this phenomenon in a manner which renders it as demonstrable as any of the propositions of Euclid.

ST. THOMAS'S HOSPITAL.

Clinical Lecture.

Nov. 25. At half-past one o'clock this day, the following clinical remarks were delivered by Mr. TRAVERS, in the female operating theatre, in reference more particularly to the case of compound fracture; a detailed account of which we subjoin.

After examining the amputated limb which was before him on the table, stating to the pupils present the extent of the injury, and the manner in which it was done, Mr. TRAVERS said:

With such an extensive injury as this before me, Gentlemen there could not be for a single moment the least doubt as to the propriety of what ought to be done. Fracture, combined with extensive laceration of the soft parts, is a most serious injury; it renders what would have been otherwise a simple, a compound fracture.

An extensive laceration of the soft parts is in itself an extremely formidable injury; we have had persons admitted into our Hospitals with destruction of the integuments so as to expose the muscles of the arms or thighs, and who have died shortly after their admission; one patient, in particular, who was under the care of the late Mr. HENRY CLINE, I recollect, did not live after the 2d day from the accident. Laceration of the soft parts is then a most serious injury, and you see why it should be; 1st. The actual exposure of surface in those cases.—2dly. The certainty of

an irregular or spasmodic action of the muscles, and also the probable chance of loss of blood, a circumstance which of all others predisposes the system to constitutional irritation; now suppose that there be added to this a fracture, not a simple transverse, but an irregular fracture, with detached portions of bone in several parts, and which will not be accepted again by the original bone; here then they must be removed by abscess, suppuration, and ulceration; *i.e.* they must be got rid of like all other extraneous bodies, they must exfoliate and be cast out; the consequence of this is, you will have an immense number of abscesses in the course of the detached portions of bone. I am not speaking in exaggerated terms, when I say that I have seen a complete bag of abscess in a case where an attempt had been made, with the best intention, though injudiciously I think, to save the leg.

Now I am speaking of common wounds, those not complicated with joints; if they communicate, however, with joints, such as the knee, ankle, or elbow joints, the danger in preserving life is much increased; injuries of joints give rise to great constitutional disorder. A boy was brought into the other hospital (Guy's) with a puncture that had been made into the knee-joint, unaccompanied with fracture; he died on the third day after his admission, having had extremely violent symptoms of constitutional irritation. On examining the joint after death, it was found that the capsular ligament had been perforated on the inner side, I believe, of the right knee, the synovial membrane had suffered acute inflammation; there was a coating of lymph, like a villous membrane, on one side, and it was quite natural on the other. Wounds communicating with joints affect the patient directly and indirectly; directly, the system sympathizes with the injury; and indirectly, they act by the ultimate recovery of the patient being imperfect The question is, under these circumstances, which is the best, to attempt to save the limb or not? In all these cases, it is of infinite importance to be prompt in your decision, more so most than in any other cases to be met with in the practice of the profession; it is of importance to bear in mind, not so much the ultimate use, or the more or less perfect motion of the limb, as whether the patient will live or not; for if he be likely to live over the accident, it is your duty to give him the best chance; it is not because he will be subject to many months' confinement, or that exfoliation and abscess will take place, that you reject saving the limb; the loss of motion at the ankle or knee-joint is quite secondary; our question is, can we, consistently with the life of the patient, save the limb: we have no right to be judges whether a

wooden leg or stiff knee, or a mutilated limb, or confinement for two years, is preferable.

Now life is endangered in several ways by injuries of this kind.—1. By what I call a shock to the nervous system, not a physical concussion, as in injuries of the head, but a concussion to the nervous system. In physical concussion you find some minute lesion or organic appearance to explain the symptoms, but in the other kind you find none. I have opened a good many heads of persons who have died of this kind of concussion, this shock to the nervous system, in whom brandy, ammonia, and other stimulants were unable to keep up the pulse, and have found nothing to account for death. The operation of this shock is generally from the first to the third day, and the patient often dies before inflammation sets in. The symptoms of this complaint are, however, quite different from those which characterize inflammation; in inflammation he does not die of non-reaction, but prostration; the one case is attended with delirium, and every symptom of disturbance to the nervous system, convulsion and stupor; in the other, and this is always the last, the pulse is preternaturally rapid, though irregular, to be felt at the heart, and not at the extremities; spasm over the whole system, as if it had been subjected to the influence of an electrical machine; delirium, followed by stupor, subsultus tendinum, and death: these are the two forms then,—direct prostration without excitement, the other direct prostration followed by excitement.

Cases.

Thos. H., aged 44, drayman, was admitted into St. Thomas's Hospital, Nov. 24, 1823, under the care of Mr. Travers, with a compound fracture of the left leg.—Says that whilst he was driving the dray the horses took fright, and he in endeavouring to jump off the shafts on which he was sitting, slipped, and the wheel went over his left leg.

Had been in the habit of taking much porter; he was quite sober, however, at the time of the accident.

The tibia is fractured and comminuted in three or four places: the fibula is also in one part, just above the outer malleolus. The integuments, or the inside of the leg, are very much lacerated; the laceration extending from the inside of the knee-joint, to very near the inner malleolus; through the upper half of the wound, the belly of the gastrocnemii projects, and on the lower half are several clots of blood.

The wound bled pretty much before he was brought to the Hospital, but since very little.

He was admitted about seven o'clock, p. m., and the accident happened two hours before his admission.

The man is very cold, and feels considerable pain in the limb; countenance pale and anxious; pulse 96; rather full. He has taken a little warm tea.

As soon as the nature of the injury was ascertained, the surgeon for the week (Mr. TRAVERS) was sent for, who arrived at 8 o'clock, and immediately on examining the part, he told the man that he must submit to an operation. This opinion was also sanctioned by Sir ASTLEY COOPER, who saw the man at the same time with Mr. Travers.

Soon after eight, the operating theatre was thronged; most of those attending the Surgical Lectures were enabled to be present, as Sir ASTLEY postponed the Lecture on that account.

At half-past 8 o'clock, the man was brought into the room, and placed with his back on the table; in a few minutes the surgeon arrived, and after the tourniquet was properly adjusted, proceeded to amputate below the knee in the following manner:

The legs being separated from each other, and the limb affected being supported by an assistant, the operator standing to the right of the patient, began the incision at the upper part of the inside of the leg, immediately below the joint, carried it obliquely downwards and outwards, so as to preserve between three or four inches of bone; he then continued the incision from the outside obliquely upwards and inwards to meet the point from which he commenced; by this means the flap was made from the integument on the outside of the leg, as the laceration on the inside extended very high up; the muscles were then divided, and the bones sawed through; after this three vessels were secured; but previous to this the head of the fibula was detached from its connexion with the tibia and taken out. One end of each ligature was cut close to the vessel, the other left hanging out. The integuments being adjusted, straps of adhesive plaster and a roller were applied.

The patient was then removed to his bed, and ordered to take forty drops of laudanum in an ounce of camphor mixture.

The removal of the limb occupied the space of five minutes; the securing of the vessels, and the time allowed for waiting to see whether any more than those secured would bleed, twenty-five more.

During the operation the man became extremely faint; but after some spirits were given him he soon revived. The operator was Mr. TRAVERS.

Nov. 25th. Did not sleep last night: he was not in any pain, excepting in his back, which ached a good deal. Between twelve and two o'clock in the night felt sick at the stomach, which soon passed off. At six this morning, jumping

and starting of the limb came on, which still continue and prevent him from sleeping. Tongue white and dry, excepting the edge, which is very red. Thirsty; respiration laborious, 42. Pulse quick, full, and rather hard. Coughs a little. Slight tenderness in epigastrio, on pressure.

Wednesday 26th, slept pretty well; tongue dry and white; not so thirsty as yesterday; pulse full and quick, 144; not so hard; respiration, 36; tenderness in epigastrio not so much as yesterday.

Stump smarts a little, but the jumping of the limb has left him; no bleeding from the wound has taken place:

℞ Pulv. Scammon. cu. Cal. ʒss. M. fiant pilulæ ij statim sumendæ.

27th. Slept till one this morning, when the knee began to shoot and jump, and continued so till between five and six; after this the limb felt very hot, and at ten hæmorrhage from the stump came on, which was stopped in a very short time, by tightening the tourniquet; the dressings were taken off, and fresh ones applied; about half a pint of blood was lost. The bleeding was attributed to the body being moved, in order to place the bed-pan under him.

Countenance anxious, pale, and death-like. He feels faint and chilly; tongue white and dry; pulse 120, tremulous, rather small; respiration, 42, laborious; bowels opened twice by the medicine; limb aches and jumps a little: brandy and water were given him this morning on account of the faintness. He was ordered to take two large spoonfuls of the saline mixture, with four minims of tincture of opium every six hours, and to have four ounces of port wine a day, and some sago.

28th. Passed a good night, and feels pretty comfortable; tongue white at the edges, and brown in the middle, dry and parched; not very thirsty; pulse 144, fuller than yesterday; respiration, 20, less laborious; bowels open twice, stools dark-coloured, and of an offensive smell; pain in epigastro removed.

Stump feels easy; very little jumping of the limb; tourniquet still on, but not tight.

Continues to take the wine, sago, and medicine; has had some mutton-broth to-day, and is ordered to have beef-tea.

Saturday, Nov. 29th. Passed a restless night; was delirious at times; countenance sallow; respiration 30; pulse 126; hiccough; bowels open twice in the night; pain in epigastrio on pressure; tongue dry and brown; thirsty, has been very sick since yesterday and vomited a good deal; stump pretty easy; outer part of the left thigh of a brownish hue; it became yesterday evening first red, then black, and afterwards of its present colour.

The following medicine was ordered for him yesterday afternoon:—

℞ Decoct. Cinchonæ ℥jss.
Tinct. ejusdem ʒj.
——— Opii m. v. M.
Fiat haustus ter die sumendus.

To-day this was countermanded, and the patient was directed to have the following medicine given him every four hours:—

℞ Mist Camp. ℥j.
Spirit. Æther. Nitr. ʒj. M.

A small quantity of castor, mixed up in a bolus, every four hours, was also prescribed. Pint of porter daily. Wine to be continued.

30th. Very restless in the middle of the night; has been dozing a good deal since; lies in that state with the eyes and mouth half open; countenance of a death-like appearance (facies hippocratica); pulse 120, rather full,—heart's action corresponding to the pulse; respiration sonorous, 42; hiccough still continues; bowels not open since the night before last; very thirsty; abdomen a little swollen, but not hard; did not ask him any questions as he was asleep.

All the dressings were removed from the stump yesterday afternoon, the limb was well washed, two or three strips only of adhesive plaster were applied; to-day the brownish appearance from the outside of the thigh is gone, but the stump is rather black, it feels easy; ordered to be kept constantly wet, with the spirit-wash warmed.

℞ Continuentur medicamenta et vimum.

At four in the afternoon his pulse began to fall, and at half past six p. m., he died.

Inspectio cadaveris.

The body was examined seventeen hours after death, by Mr. Babington, dresser to Mr. Travers, in the presence of two or three pupils.

The examination was made with such secrecy, that we were not able to be present; but upon inspecting the body afterwards, we observed he following appearances:

External appearances.——Countenance sallow; back part of the right hand quite black; veins on the front of the abdomen very distinct, particularly on the left side, and of a blueish appearance; the cuticle removed for three or four inches in the neighbourhood of the stump, which was of a purplish hue.

Chest.—Effusion of a little more than half a pint of dark-coloured fluid into the right side of the chest; the lungs of this side were of a light gray marble colour anteriorly and externally, although when they were cut into, they were found to be red; posteriorly and laterally, of a livid appearance, and when divided, a considerable quantity of red frothy mucus came out; the right pleura costalis was red, but it did not adhere to the lungs—the lungs on the left side were more vascular anteriorly than those of the right: in the other parts they presented nearly the same appearances. There were

two or three slight adhesions of the left pleura costalis to the pleura pulmonalis. Six ounces of dark-coloured fluid were effused into this side of the chest: in one word, the lungs were vascular throughout; but on the back part and sides they were gorged with blood, or bloody mucus. The bronchiæ contained some mucus: we believe that they were nearly full. The heart was very large, and more vascular than natural. The aorta and pulmonary arteries contained coagulated blood, or, at least, its fibrinous part. The right auricle and venæ cavæ were filled with dark-coloured uncoagulated blood. The bronchial glands were considerably enlarged.

Abdomen.—Liver was very large and hard, of a yellowish appearance, both externally and internally: the gall-bladder contained a slight quantity of yellow bile. There were some livid spots on the outside of the stomach in several places: its internal membrane was intensely inflamed. The kidneys were more vascular than natural, particularly the right. Bladder contained some urine, and was quite healthy.

The intestines presented no marks of inflammation.

The lower part of the aorta and vena cava, together with the iliac vessels, exhibited, on their inner surface, a different appearance from what is found in the healthy state; the arteries were slightly red internally, the veins livid; the nerves were healthy.

We were informed that there was a large quantity of matter formed near the stump; this, however, had been let out before we saw the body; there were evident marks of intense inflammation. The brain and spinal cord were not examined.

Before the accident, for nearly a twelve-month, he had been subject to a troublesome cough and vomiting of blood. —A Coroner's inquest was held on the body, and the verdict returned was, Accidental Death.

We are compelled to allude to one circumstance connected with the history of this case: on the 27th, hæmorrhage came on as is supposed in consequence of the patient being obliged to move his body for the purpose of allowing a bed-pan to be passed under him, to receive his evacuations. Here then, it appears, has the life of an individual been endangered for want of a simple contrivance that might have enabled him to pass his stools without disturbing in the least the limb, and which contrivance might be formed without either much skill or expense. We have seen so many instances of this kind in the Borough Hospitals, that we shall take every opportunity of giving publicity to them when they occur, in the expectation that a cause of so much mischief will soon be removed. It is, however, melancholy to

state that this is but one out of many evils in the Metropolitan Hospitals, which are a disgrace to those who allow them to exist.—In due time we shall expose them all.

Nov. 27th. John C. aged 39, Willandon, Sussex, labourer, was admitted into Isaac's Ward, Saturday, Nov. 22, with stone. Says that four years ago he was seized with pain in his kidneys, particularly the left, which continued more or less till six months ago: and in the beginning of last summer, the pain in the kidneys went off, but scalding in making water, which he had felt more or less for these four years past, then became much worse. He could sometimes make a good deal, at others but a few drops, and immediately after felt a shooting pain in his yard, all through the urethra. At this time he also felt a shooting pain in the anus, after stool. For these seven months past, his general health has been very good, but prior to this time it was very much deranged.

Stout, but not of a strong constitution—generally walks about the ward with the body slightly bent, as this position gives him ease.

Tongue white, excepting at the edges, which are red; moist. Appetite very good; not thirsty; pupils dilated; bowels regular; urine turbid; white sediment at the bottom; pulse 75; full.

Abdomen round; slight tenderness, on pressure, just above the pubis, and in the region of the left kidney; feels a shooting pain through the yard at the time, and after he is making water; and also, occasionally, down through the lower part of the back. Was sounded on Monday, when a stone was ascertained to be in the bladder. Takes a little medicine to keep his bowels regular.

28th. At half past one this day the patient was brought into the operating room, and a stone of a circular figure, not very thick, somewhat larger than a crown, was extracted from the bladder. There was a slight difficulty in the extraction, which arose from its shape. The stone was composed of uric acid. The operator was Mr. Travers. The patient is doing well.

MIDDLESEX HOSPITAL.

Acute Ophthalmia.

Maria Ford, aged 17.

This young woman has been for two years subject to a scabby eruption about the eyes. When she first applied here, she had an inflammation of the right eye so severe as to threaten its rapid destruction. The albuginea was loaded with vessels exhibiting a very high degree of inflammation. A pustule, or ulcer, was forming on the cornea, and the iris was to appearance highly irritable. Diminution of the pupil, at-

tended with intolerance of light, and pain in the right temple. Attributes the attack to exposure to cold during menstruation.

Nov. 1st and 2nd.—Two leeches to the inner surface of the palpebræ of the right eye; calomel and opium every night.

3rd.—Repeat the leeches, and continue the calomel and opium. A draught of senna and salts to be given her.

4th.—A blister to the temple; and the extract of Belladonna to be rubbed over the palpebræ externally.

8th.—The inflammation has subsided; redness diminished; effects of light not so severe; pain diminished; pupil still contracted; and coagulable lymph effused on the cornea. A poultice was applied, wetted with the following lotion:

℞ Plumbi superacetatis grana decem, opii duri drachman dimidiam, aquæ distillatæ libram unam.

Pro Cataplasmate.

Calomel and opium to be continued. Blister to the temple.

20th.—Considerably improved; the redness of the albuginea has disappeared: transparency of the cornea nearly perfect; can bear the light without uneasiness; a drop of purulent matter is collected in the inner canthus.

℞ Zinci Sulphatis, gr. iv.
Liq. Plumbi. Acet. ♏ x.
Aquæ Distillatæ. ℥ iv. M.
Fiat Collyrium.

The finger to be pressed on the lachrymal sac, to discharge the matter from it, a drop of the lotion to be applied to the inner canthus of the eye, that it may be absorbed by the puncta.

26th.—The eye has at this time nearly recovered its ordinary power, and there is nothing further in this case that we need notice.

ST. GEORGE'S HOSPITAL.

James Wilson, 1st Regiment of Horse Guards, was received as an in-patient, having two nodes, one on the anterior edge of the tibia, and the other on the fibula of the left leg. These swellings began about seventeen months ago, from no evident cause. At first, no pain was experienced, but, after five months, they became troublesome; on this account, mercury was given, by which the symptoms were aggravated. About six months since, the pain was so severe, that it entirely deprived him of sleep, and prevented him from going on duty. After having been an out-patient for a short time, without getting better, he was received into the Hospital on the 22nd instant; on the 24th, incisions the whole length of the nodes were made upon them, completely through the periosteum; these gave immediate relief; the periosteum was not much thickened, the swellings being entirely bone.

26th.—The pain has not returned.

28th.—General health good,

has had a night of uninterrupted repose. No recurrence of pain.

ANTIQUITY OF SURGERY.

From the account given by Homer, of Machaon and Podalirius, the sons of Œsculapius, having acted as surgeons to the Grecian army during the siege of Troy, Celsus infers, that surgery is the most ancient branch of the medical art. "Quos tamen Homerus, non in pestilentiâ, neque in variis generibus morborum aliquid attulisse auxilii, sed vulneribus tantummodo ferro et medicamentis mederi solitos esse proposuit—Ex quo apparet, has partes medecinæ solas ab his esse tentatas, easque esse vetustissimas." These (Machaon and Podalirius) Homer states to have been accustomed to give their assistance, not in the plague, nor in the various forms of disease, but to the healing wounds by incision and local applications. Hence it appears that surgery was the only science practised by them—and that it is the most ancient.

LECTURE XV.

In the last Lecture, we defined Gangrene as a partial death; we described to you the symptoms which attended it, when it was the result of high and active inflammation, and when it was the result of a low degree of heat. We described to you the sloughing process, and the manner in which the cellular tissue, the blood-vessels, the nerves, and even the bones, became subject to gangrene. We proceeded to state to you the kind of constitution which was most subject to gangrene, and the state of debility accompanied with irritability, which generally led to it. We stated that gangrene arose generally from inflammation, but that it sometimes arose from diseases unaccompanied with inflammation, by which the circulation was considerably impeded; that in consequence of the coagulation of the blood in the blood-vessels under a state of gangrene, the circulation could never be restored, and that the coagulum not only extended through the dead vessels, but proceeded to a considerable extent into the living vessels, beyond the parts at which gangrene had commenced.

We shall now proceed to consider the treatment which is usually employed to prevent gangrene, and to arrest the sloughing process. You must endeavour to soothe the parts by the application of leeches, with a view of checking the excess of action. It generally

happens, in cases of gangrene, that the body will not bear any considerable degree of depletion; but local depletion, by means of leeches, may be safely resorted to. Thus, in compound fracture of the leg, for instance, gangrene may be prevented by the application of leeches, when it would not be equally safe to take blood from the arm. Soothing applications, such as poppy fomentations and poppy poultices, should be employed to subdue the excessive action which threatens the destruction of the life of the part. It will be necessary, at the same time, to attend to the constitutional treatment of the patient. In this metropolis, it is seldom safe to take blood from the arm of patients to prevent gangrene. In the country a different practice may be pursued; and it will frequently be necessary to take away blood in erysipelas, and other cases, in which we cannot and dare not deplete in town, where the constitution of patients is broken by intemperance, or enfeebled by deteriorated air. When you take away blood, however, to prevent gangrene, do not take more than eight or ten ounces, lest the vigour of the circulation, and consequently the nervous powers of the constitution, should be too much diminished. Two or three grains of calomel should be given at night, with a view of restoring the defective secretions of the intestinal canal and the liver; and the liquor ammoniæ acetatis, with a few drops of the tincture of opium, should be given several times in the day. By the calomel you restore the secretions; and by the opium you tranquillize the system and diminish the irritability which leads to the destruction of the life of the parts. Do not begin by stimulating the constitution too much in cases of gangrene. The effect of opium may, in some respects, be similar to that of taking a stimulus into the system, but it is by diminishing excessive action, at the same time that it increases the strength of the body, that opium becomes so valuable a medicine in these cases. The best means, therefore, of preventing gangrene, are to restore the secretions by calomel, and to diminish irritability by opium, and, in some cases, by taking away very small quantities of blood.

If the gangrene arise from the application of cold, the treatment must be different. In these cases, the action of the

parts is feeble from the diminution of nervous power, and it will be proper to restore it to a healthy state by stimulants of the most gentle kind. For this purpose, the best application is the camphorated spirit of wine, accompanied with gentle friction. If you are called to a patient whose feet are benumbed by the application of cold, you must sit by his bed-side, pour the camphorated spirit into your hand, and rub it on his feet with the utmost possible gentleness, so that the part may not be irritated by violent friction. When the first effects of cold are removed, it will be proper to apply poultices to the part. The poultices must be cold, for warm applications to the part are to be carefully avoided. One of the most valuable of our nobility died of gangrene from an imprudence in this respect. He was out shooting in December last, and his feet having become benumbed, he put them into warm water as soon as he returned home. The consequence was, that his toe became gangrenous; the gangrene soon extended to the other foot, and he died from its effects. When parts are frost-bitten in colder climates, you are aware that the common practice is to restore the circulation by rubbing them with snow.

So much for the prevention of gangrene.

But as soon as gangrene has commenced, it will be necessary to apply a gentle stimulus to the parts, with a view of supporting the action of the surrounding parts which are threatened with the destruction of life. The application which I have found to be most uniformly successful in such cases, is the poultice of stale beer grounds. The stale beer grounds, which may be obtained in any public house, should be mixed with linseed meal, and a poultice formed of them, which will produce a gentle and beneficial stimulus to the part, and prevent the gangrene from spreading to the surrounding skin. Spirituous fomentations are also of use for the same purpose. At the same time that this local treatment is employed, means must be taken to support the constitution, which is debilitated by excessive action. The best mode of supporting the constitution is by the exhibition of ammonia united with opium. From seven to ten grains of the carbonate of ammonia, with twenty drops or half a drachm of the tincture of opium, should be taken two or

three times a day, or even more frequently, as once every four hours. This plan will generally prevent the extension of gangrene. Bark was formerly extolled, as possessing great virtue in cases of gangrene; but it is doubtful whether it does not do as much harm as good. For the first two or three days the patient feels comfortable, and his health is improved by its exhibition; but after a short time his stomach becomes loaded and oppressed. It first makes him costive, and then purges; and after a little time we are obliged to suspend its use. I am much disposed to try in these cases the new form of this medicine, which agrees so well with the stomach; I allude to the sulphate of quinine. It is my intention to give it a full trial in the first case of gangrene which I meet with; and I recommend you to try it yourselves in the cases of gangrene which may come under your observation. An excellent medicine used in the other Hospital is a bolus, of five grains of the carbonate of ammonia with ten grains of musk, given every four hours. I have seen this medicine produce the best effects in sloughing sores in the foul wards, and in gangrenous sores, where the gangrene was much disposed to spread. The musk has the effect of keeping up the stimulus of the ammonia, which is apt to subside after a few hours, when the ammonia is exhibited alone. A port wine poultice is an admirable application in these cases. I mentioned to you, a few days ago, the case of a girl in the other Hospital, who had a gangrenous sore in the pudendum, where a great variety of applications had been tried without any beneficial result. At last a port wine poultice was applied, and with such immediate good effects, that, though I had before despaired of her life, the last time I saw her the sore was brought into such a healthy state, that there are great hopes of her recovery. Applications of turpentine are often of use in these cases, for the purpose of stimulating the parts. After great want of circulation in any part, from the course of the blood having been arrested, sloughing sores are very apt to occur. Thus, after the operation of tying the femoral artery, if the limb be suffered to rest in the same position for a considerable time, a small gangrenous spot frequently appears. In such cases the spirit of turpentine is the best application. Yeast is

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often applied with the same view. A lotion much used in the other Hospital, for this purpose, is the formula which used to be called the epithema lithargyri acetatis, but now called the epithema plumbi subacetatis

The following is the mode of preparing it:—

℞ Confect. Ros ℥j.
Mel. Rosæ
Tinct. Opii } āā
Liq. Plumbi Subacet. } ℥jj. M.

This is an application which accords extremely well with limbs in a state of gangrene, when the dead are separating from the living parts; it is a very useful application then in gangrene. During the sloughing process, the nitric acid is the best application that can be used: when the gangrene stops, and the line of demarcation is drawn, and the sloughing process is commencing, the nitric acid may be employed in the proportion of fifty drops to a pint of water. I have seen very good effects from an application composed of vinegar and camphor mixture, about four ounces of the vinegar to twelve ounces of the camphor mixture; I have seen this of service when no other application had been used, as in the case of a gentleman at Peckham whom I attended with Mr. A. These are the different modes of treatment for the prevention of gangrene, and the arresting of the sloughing process.

On the propriety of AMPUTATION, *and the cases in which it may be performed.*

As to the propriety of amputation,—there is no occasion in general for amputation in cases of gangrene when the sloughing process is going on, as you have an opportunity of seeing in the man at the other Hospital, where Nature has performed the operation herself, without any assistance;—if the surgeon will be content to wait a short time, and the patient is disposed also, you will find that the parts will separate as well without as with an operation. Now the old surgeons, who observed nature well, adopted the very same plan in their amputations as nature pursues in these cases; the skin separates the longest, the muscles next, and then the tendons, together with the bones, which are left considerably shorter than the rest, as you may observe from the specimen on the table. When bones ulcerate, the tendon soon separates, and the bones become covered in by skin and muscle; the limb, however,

before me was amputated. The cases in which you are called on to perform the operation of amputation are when the patient will not be able to sustain the shock to the constitution; then, Gentlemen, if gangrene be going on in any part, or through the middle of the leg, by which the power of the constitution will be nearly destroyed, you may have recourse to an operation; but even here there will not always be occasion for it. You have an opportunity of seeing in the other Hospital at present, in a case to which I have so often alluded, separation taking place above the centre of the leg; there is no necessity to amputate always under such circumstances, and you can give the patient a chance of his life, without resorting to it, if he dread the knife.

I say, Gentlemen, *in constitutional gangrene*, never amputate till the sloughing process has commenced, and healthy granulations are to be seen on the sore; for if an operation be performed, the parts will assume exactly the same appearance after as before it. It is curious to see how the loss of a slight quantity of blood will destroy life in these cases. When I was a dresser at these Hospitals, during my apprenticeship, a case of sloughing opposite to the calf was brought in: Mr. Cline, my old master, on going round the wards, said to the dresser, that the projecting ends of the bone had better be removed. There were some granulations between the bones, which, in sawing them off, the dresser did not observe, and therefore cut through them; little hæmorrhage ensued; no ligature was applied; yet, on the same night, the patient died. There was a case under the care of Mr. Forster, in the other Hospital, on which he performed the operation of amputation: there was gangrene on one foot, a slight gangrene on the nose, and the other foot. The leg was amputated; but the infection spread in the nose and foot, which, before the operation, were slightly gangrenous: then, Gentlemen, it is proper to consider that amputation should never be performed till the constitution is in a sound state, and healthy granulations have appeared.

But, with respect to *gangrene*, from *defective action*, or *accident*—

When called to a person labouring under gangrene, arising from accident or pressure on some important vessel, amputation may be performed

without the least hesitation. A girl was brought to this Hospital, who, in endeavouring to reach something from the chimney-piece, trod on the fender, which turned over on its edge, and she fell backwards; there was a compound dislocation of the elbow-joint, together with a wound of the brachial artery; this vessel was tied by the dresser, hæmorrhage was arrested, gangrene soon afterwards appeared in the finger, when, nine days from the accident, the operation of amputation was performed above the elbow-joint, and the patient did extremely well. A man was brought to Guy's from Woolwich with popliteal aneurism: the aneurism had acquired a great size; there was a gangrenous state of the limb below, so that it was thought there was no chance of saving his life by tying the artery; therefore amputation was performed. Before the operation the pulse was from 120 to 130. In the evening, after the removal of the limb, I sent Mr. Callaway, who was my apprentice at that time, to see how the patient was doing: he found that the pulse had fallen to 90; and no stump that ever came under my care turned out more favourably. Thus, instead of increasing the irritability of the constitution, the source of the irritation being removed, the health of the patient became improved.

Of Gangrene in old Persons.—We often find old persons afflicted with gangrene, from very slight causes, and particularly those who are tall. The heart being naturally weakened by age, the circulation becomes extremely languid in the feet: hence mortification of the toes ensues. The appearances which the part assumes are these:—at first it is red and painful; the person, thinking little of the matter, puts upon the affected part a piece of linen; in a few days the cuticle comes off, and there issues from the surface a sanious discharge; red streaks are now seen passing from different parts of the foot up the leg; and the glands in the groin often undergo considerable inflammation and enlargement; all the absorbent vessels of the foot becoming inflamed, produce universal redness of the diseased member. Soon after this the gangrene begins to extend, destroys the whole of the foot, and passes to the upper part of the leg, where it usually stops, as it seldom reaches the thigh; the constitution becomes considerably influenced;

there is some degree of fever, and the cheeks are of a florid red colour. This gangrene will not commonly destroy life, if attention be paid to the patient. It generally arises from ossification of the arteries—not of the large vessels, but of the small. These losing their elasticity, combined with a debilitated action of the heart, give rise to the disease of which I am now speaking. The earthy matter is sometimes deposited in great quantities in the large vessels; and here (*showing a preparation*) is an example, in which the deposition of earthy substance has rendered the principal arteries of the leg, and even part of the femoral artery, impervious.

I recollect some time ago a very intelligent surgeon telling me, that he thought a certain nobleman, whom he was at that time attending, had ossification of the arteries of the leg, and that it would some day give rise to gangrene,—of which gangrene his Lordship has since died.

Where ossification of the blood-vessels exists, very slight causes will give rise to gangrene. A gentleman of the City, in cutting a toe-nail, carried the knife too far, and cut the quick, as it is termed: the wound soon became gangrenous and black, and in the sequel he died. I attended a gentleman, an old surgeon, who, for the purpose of getting rid of a bunion, had (most foolishly) put a lancet into it: gangrene followed, and he died. I was lately sent for by Mr. Holt, surgeon, of Tottenham, to see a gentleman, who, when cutting a corn, had carried the incision a little too far, so as to produce bleeding: gangrene here likewise took place. Old persons must, therefore, be cautious how they finger their toes—(*a laugh*): for life being almost out, very little will prove a complete extinguisher.

With regard to *treatment*—a poultice, composed of port wine and linseed-meal, will be found the best *local* application; and your *internal* remedy should consist of opium combined with ammonia. You must not generally expect that these cases will recover. I have known, however, a single toe, a whole set, and even the entire foot, to slough, and yet the patient do well. In these cases you must never amputate—whether there be healthy granulations or not, do not amputate; for as surely as you do, mortification of the stump will supervene.

The next subject of which I shall speak is

Carbuncle.—Of this I shall have but little to say, as many

of the foregoing observations are equally applicable here.

When carbuncle is about to take place in any part, it is generally preceded by pain, and at first a swelling of considerable hardness; this is occasioned by the adhesive inflammation; the surface of the tumour then assumes a livid redness and a spongy soft feel; little ulcers now form in the skin, which, from their number, give it a sieve-like appearance, so numerous are the orifices: from these a white discharge passes—this fluid resembles water and flour mixed together; and a man who has seen much of carbuncle, knows the nature of the disease instantly upon seeing the discharge. When the little openings are all formed into one, the dead cellular membrane begins to escape, for it previously cannot do so, from the smallness of the apertures. In gangrene of the extremities there is not this mechanical obstruction to the sloughing of the dead part. And though gangrene is generally difficult to cure, yet carbuncle usually does well, except when situated on the head or neck. Though persons will recover from carbuncles of an enormous size upon the back, yet very small ones on the head or neck will often destroy life; indeed I never saw a patient who recovered from carbuncle upon the head; in these cases there is effusion between the tunica arachnoides and pia mater. The inflammation which attends fistula in ano will sometimes destroy the cellular membrane of the neighbouring parts,—thereby occasioning an enormous quantity of the nates to slough, and yet the patient shall do well.

The *peculiar treatment* of carbuncle consists in making upon the surface of the swelling, at an early period of the disease, a large crucial incision, for the purpose of affording the deadened parts an opportunity of escaping; then apply the port wine poultice, and give the patient such stimulants as will tend to increase the vigour of his constitution: and here we shall again find opium and ammonia our sheet-anchors.

Of Erysipelas.—Inflammation of the skin is generally extensive. Why? In consequence of the surface being unbroken. Thus, when the pleura or peritoneum is attacked by inflammation, the whole of these membranes usually become affected by it; and also when erysipelatous inflammation invades the skin, it is not uncommon to see it run from one

part to another, till half the body is covered by it. Sometimes it is ushered in by fever, and sometimes not. Certain constitutions are sooner affected by it than others, and often its effects appear to be entirely local. But unquestionably it affects the constitution more frequently than otherwise. Its characteristic appearances are, a florid skin, with vesicles containing a secretion of an amber colour under the raised cuticle. It is seldom that the skin suppurates in these cases; the cellular membrane, however, occasionally does. It is very common for erysipelatous inflammation to terminate in gangrene. You must not consider all cases of inflamed skin erysipelas. I have often seen cases treated as such, where it would have been right to deplete. The best characteristic sign is its vesicular appearance; and this constitutes a specific difference between it and common inflammation.

The head seems to be more commonly affected by it than any other part; it often succeeds the most trifling injury of the scalp; and, like carbuncle, when it occurs in this situation, generally destroys life. I had the misfortune to lose a lady of considerable consequence, from its effects, where it came on after the removal of a small encysted tumour from the forehead. It made its appearance three days after the operation, and all the exertions of Dr. Baillie and myself were unable to arrest its progress. Thus a trifling operation on the scalp destroyed life, in consequence of having been succeeded by erysipelatous inflammation.

After a person has once had this disease, he is very subject to it again; and some persons appear to be predisposed to its formation.

It generally makes its appearance in Spring and Autumn, but seldom in Winter, and not very often in Summer. Whatever renders the body irritable predisposes to erysipelas. In hospital practice, surgeons were formerly exceedingly afraid to operate in Autumn and Spring: for it has often happened that the stimulating effects of adhesive plaster have produced this disease, and have led to the death of the patient. Sometimes it is epidemic, and sometimes contagious.

Treatment of Erysipelas.—In this town the following plan is pursued, and which, *for London*, is undoubtedly the best:—You at first give calomel, for the purpose of restoring

the secretions of the liver and intestines; then allow a generous diet, and administer the ordinary tonics; or, from what I have witnessed, I would advise you to try the sulphate of quinine; it is a most powerful tonic, excites in the stomach a genial warmth, and will often remain in that organ when bark will not.

Dr Marcet, now deceased, but late a physician of Guy's, endeavoured to ascertain whether the antiphlogistic or tonic mode of treatment was best for this disease; therefore he put two persons into adjoining beds having erysipelas; to one of whom were given tonics and a generous diet; to the other, salines and low diet; blood likewise was abstracted from the latter; they both recovered, the former rapidly, while the latter lingered in a debilitated state for a very considerable period. You will find, where erysipelas attacks the lower orders of this town, who weaken their constitutions by the excessive use of ardent spirits, that gin may be sometimes advantageously employed as a remedy, at once being the evil and its cure;—the last two cases of this disease which I saw in the other Hospital, prove the truth of what I am now saying: a man had erysipelas dreadfully severe; his head swollen to an enormous size, and his recovery, by every person, thought impossible. It was discovered, one day, that his wife brought him some gin. He declared that he was better from having drank it, was consequently permitted its continuance, and, to the astonishment of all, he rapidly got well.

Not six weeks after this, there was another man, similarly circumstanced, brought into the same ward; and having, from the result of the above case, formed a high opinion of gin (*a laugh*), I directed the Sister to give it here also; and really this patient recovered as speedily as the former.

The Medico-Chirurgical Quarterly Review and The Lancet.

The Medico-Chirurgical Reviewers having offered a few words of advice to The Lancet, and having, moreover, condescended to express their willingness to take us under their protection, we shall quote their article, and proceed to address a few observations in our turn to our senior contemporaries.

"*The Lancet, No.* 6, *for Sunday, November* 9, 1823, *p.* 36, *price* 6*d.*

"We hold it to be a breach

of etiquette for one periodical publication to animadvert on the conduct of another, unless attacked or interfered with itself. We mean, of course, *medical* journals; for political publications use no ceremony with each other. In offering a word or two of advice to our young friend THE LANCET, and through him to several other of our juvenile cotemporaries, we trust they will not impute to us any unworthy motives, and that, on mature reflection, they will acknowledge the propriety of the advice we give.

"We are convinced then, that no medical periodical publication can succeed, unless conducted on *unexceptionable* principles—we mean such principles as cannot *reasonably* be objected to by the members of the profession. We think that the unauthorized publication of a man's lectures, as they are delivered from day to day, cannot be defended on principles of morality, equity, or medical ethics; and therefore we advise our junior cotemporaries not to take advantage of, or rely upon, a practice which can, at best, but afford a temporary interest. Secondly, we would dissuade them, if in our power, from mixing up politics, theatrical criticisms, and other heterogeneous matters, with medical science or literature. It is an unnatural union, which cannot long hold together, and has invariably failed hitherto in every instance where it was attempted.

"The above exceptions made, we wish every success to THE LANCET, and all other candidates for public favour—nor will we ever refuse to give whatever publicity they require through the medium of this Journal."—*Medico-Chirurgical Review*, Dec. 1823.

The Reviewer makes frequent indirect appeals in this article to his age, and we must confess that he appears to have freely availed himself of the privileges of advanced years. We have great reverence for the age, we had almost said, the senility of the Reviewer, but we cannot compliment him on the clearness of his understanding. He sets out with declaring, that he considers it "a breach of etiquette for one medical periodical publication to animadvert on the conduct of another, unless attacked or interfered with itself;" and how does he illustrate his own position? Why, by immediately making a gratuitous attack on the morality of THE LANCET. We profess ourselves utterly unable to understand that part of the Reviewer's strictures, in which we are charged with immorality for the publication of reports of the Lectures delivered at St. Thomas's Hospital. We are aware, indeed, that some men entertain very different notions of morality from others. Thus the once celebrated Beau Brummell held it to be positively immoral to drink porter with his cheese after dinner, port wine being in his opinion the only virtuous beverage on that occasion. We

suspect, however, that as the Reviewer takes a distinction between morality in its ordinary sense, and what he terms 'medical ethics,' his notion of the guilt of this part of our publication depends upon a distinction which is as unintelligible to us, as the charge of immorality which may have have been founded upon it.

His opinion of the value of the Lectures, from which THE LANCET derives so much of its interest, is as little entitled to a serious refutation as this attack on our morality. We have reason to know, that our reports of Sir Astley Cooper's Lectures, though unauthorized, and though not given with greater accuracy than the equally unauthorized reports of Parliamentary speeches, have excited the greatest interest among those whose approbation we are much more solicitous of obtaining than that of the *Medico-Chirurgical Reviewers;* and that though they cannot exalt, they may have contributed to extend the reputation of the distinguished Professor who delivers them. With respect to the Reviewer's objection to the union of lighter articles with the subjects to which THE LANCET is chiefly devoted, we are disposed to agree with him in principle; but a variety of tastes must be consulted in a work like ours; and if his advice has been prompted solely by solicitude for our success, we can assure him, that, as far as extent of circulation may be taken as a criterion, THE LANCET could not have given greater satisfaction to its readers, if its pages had been as uniformly dull as those of the *Medico-Chirurgical Review.*

As to the readiness of the Reviewers to give us all the publicity we *require*, we can assure them, that if the amount of their concessions is to be proportioned to our demands upon their courtesy, they have little to apprehend from our importunities. We require no publicity through the medium of their Journal, beyond that which, in the discharge of their duty, as faithful Medical Journalists, they must give to many of the subjects discussed in THE LANCET; and we doubt whether, with reference to the mere question of comparative circulation, the Medico-Chirurgical Review is in a condition to afford us any assistance.

THE STOMACH SYRINGE.

A correspondent of the *Courrier François*, after referring to the article which appeared in THE LANCET, of November 23rd, observes, "That the Instrument for pumping poison from the stomach, examined by Sir Astley Cooper, is not new in France. It was pointed out, he says, "by a professor of the School of Medicine at Paris" in 1809, and is described in the *Bulletin de Pharmacie.*" We shall return to this subject.

GUY'S HOSPITAL.

Case of Elephantiasis.

Dec. 5. Maria B. aged 43, married, and mother of two children, was admitted into Dorcas's Ward, Nov. 26, with swelling of the right leg. Says that several years ago she had a large sore on the front of the right leg, which remained open for six months, and then healed up; the leg continued quite sound till four years ago, when it became inflamed, and two or three abscesses formed on it, which were obliged to be opened; a good deal of pus was discharged, and they soon got well; immediately after this, the skin all over the leg became slightly red, a thin humour began to ooze out, and a dry white scurf formed in several parts of the limb, which used to fall off, and leave the cutis inflamed; the places were, however, very speedily covered by fresh incrustations. Swelling of the leg now commenced, and has been gradually increasing ever since. In the early part of the complaint, the patient was seized with rigors once or twice a week, and these were succeeded by great heats all over the body, together with small red spots on the limb affected, which continued in that state for two or three days, then turned purple, and disappeared; afterwards the rigors came on only once a month, or even less frequently, till within six months ago, since which they have never returned, and her general health has been much improved; invariably after the rigors, those spots appeared on the leg, and sometimes even on the thigh.

In the habit of going out to service, and working very hard, she only left her place about three weeks ago. Rather stout, of a strong constitution, sharp features, countenance slightly flushed, lies or sits on the bed during the whole of the day, as she finds herself much better when she keeps quiet. Eyes rather prominent, and she states that during these few days her sight has not been so good as before; in other respects they are natural. Tongue moist, and slightly furred; appetite good; not thirsty; bowels kept regular by the house medicine (sulphate of magnesia and infusion of senna); urine natural at present, and has been so during the last fortnight, but for three or four months before this she voided very little, no more than half a pint in the 24 hours, which was very turbid. Menses have always been regular; pulse small, 72; respiration natural; heart's action corresponding in number to the pulse at the wrist, but not in force, being much stronger in proportion than it. She has had a palpitation of the heart occasionally of late, also a choking sensation in the throat at times, which she attributes coming on at first to a cold. External jugulars not dilated; no cough; sleeps

well; is allowed to take about 4oz. of animal food a day.

State of the limb affected.—There is very little feeling in any part of the leg, particularly at the middle and outer part, which is also very hard, slightly red, and has a little scurf on it; both the upper and lower parts of the leg, externally, are of a pale white appearance, with very few scales on them; but the whole of the back and inside of the leg are covered with a dry scurf, of a whitish colour, which comes on after a time, and is soon replaced by fresh. There is a clear discharge, like water, from several places in the leg. The thigh is also swollen, but not so much in proportion as the leg; there is a very large scab on the back part, covered with scurf like that on the leg.

Size of the right leg.—Circumference of the middle, 20; of the upper part, 19; and of the lower, 15 inches.

Dimensions of the sound leg.—Circumference of the middle, 15; upper part, 14; and lower part 10.

Soap plaster and bandaging are the applications used to the limb; and the house mixture, occasionally, is the only medicine that has been yet ordered.

Dec. 12th. The size of the limb is a little diminished. The same applications are continued as mentioned last week, viz., the bandage and soap plaster. Her general health is pretty good.

19th. The size of the limb is much reduced; the same applications are continued, and the patient avoids all exercise; her health is very good.

Sloughing of the Pudendum.

Dec. 5th.—Sarah B., aged 15, was admitted into Patience Ward, Sept. 17th, 1823, with chancres and gonorrhœa. Says that six months before her admission she had a very large sore on the back part of the right foot, which gave her considerable pain, and discharged considerably. This was healed up in about two months' time, by means of poultices and rest; and she remained quite well till September, when she was attacked with syphilis, (a complaint which her vocation particularly exposed her to:) for this she came to Guy's. At the time of her admission there was a small sloughing sore, having the appearance of a chancre, on the left side of the pudendum, and which had existed for ten days. She was ordered to undergo a course of mercury; but was only able to rub in twice or three times, as the sore on the pudendum became much worse. After the employment of mercury was omitted, she took bark and opium in large quantities, and had a variety of remedies, such as linseed-meal and bread and water poultices, nitric acid wash, turpentine, stale beer grounds, applied to the wound; all of which agreed with it but for a short time, as they

exerted no influence on the wound after they had been used a week.

On the 29th of Oct. she was removed from Patience, (which is the ward for the female venereal patients) to a clean ward (Lydia), where she is at present. Soon after this, port wine was ordered to be applied to the wound, from which she has derived considerable benefit; her general health is also better now than it has been for some time past. Appetite pretty good; tongue slightly furred; not thirsty; bowels regular; countenance flushed; pulse quick and small, 150; sleeps well; pain in the forehead: pupils dilated; jumps and starts a good deal in her sleep, and has a bad taste in her mouth in the morning; abdomen free from pain on pressure, excepting just above the pubes; feels a great itching in the pudendum, and has also a considerable pain in the back part of the head near the tuberosity of the occiput, particularly on pressure; is feverish towards night, and perspires a good deal.

Wound.—A little to the left of the pudendum is a large sore, quite red on its surface, depressed in the centre; the extreme edge white; for two-thirds of an inch round it, is black. Lint dipped in port wine is applied to the part, and over this is placed a linseed meal poultice. The application is renewed every four hours.

She is taking the decoction, together with the tincture of bark, and subcarbonate of ammonia; she also takes a grain of opium at bed-time.

Four ounces of meat and six ounces of port wine a day.

[This is the case referred to by Sir Astley Cooper, in his lecture on gangrene.]

The patient is not so well. Since Monday, the wound has been assuming an unhealthy appearance.

On Tuesday (Dec. 9,) the application of port wine to the part was discontinued by Sir Astley Cooper's request, and a linseed meal poultice covered with the London treacle substituted for it. This, however, disagreed with the wound, and yesterday the port wine was ordered to be applied again. The wound has a foul appearance, and has extended a little way down the thigh. She loaths all food that is brought to her; but continues to take the decoction of bark, &c., together with port wine.

Dec. 16. Since the application of the port wine to the part, the wound has been getting much better, and the patient's health is much improved.

Middlesex Hospital.

Oct. 29th.—E. J. aged 33. This man was brought into the Hospital suffering from retention of urine. It was immediately proposed to pass a catheter into the bladder, when he vehemently declared

that it was not possible, and upon the necessity of this measure being pressed upon him, he entreated to have the smallest sized bougie passed, as he had himself in vain attempted to introduce a wire. On examination, it was found that a great part of the urethra had been destroyed by ulceration, which had extended down between the prepuce and body of the penis. Just behind the glans, the urethra opened by a very small orifice, surrounded with so hard a substance that the point of the smallest bougie could with difficulty be introduced. A very small bougie was, however, passed into the bladder, and afterwards the smallest elastic *gum* catheter that could be procured, but very little water was found in the bladder. Leeches and fomentation to the pubes were ordered, and an opiate clyster to be administered; a cordial mixture was given. He died the next day.

Dissection.—The bladder was found contracted to the form and size of an egg—its substance much thickened and firm. The internal coat was universally inflamed. Each fold was surrounded by a black streak, resembling black extravasated blood, and a blush of redness extended generally over the surface. The dissection could not with convenience be further prosecuted; but in these appearances we have sufficient proof that the increased excitement and contraction of the bladder had produced the irritation and fever which destroyed him. The urethra exhibited the appearances of former inflammation; it was much contracted and indurated, and hard lines like cords were found running longitudinally.—There was a second stricture and the commencement of a false passage.

C., aged 20, admitted Nov. 27th.—This man was brought here from Hendon, with a compound fracture of the left arm, occasioned by the wheel of a cart having passed over it. The superior portion of the fractured bone protruded through the integuments, a little below the insertion of the deltoid, near the belly of the biceps muscle. The external condyle was likewise fractured; but there was not so much laceration of the integuments, externally, as might have been anticipated. The patient was placed in bed, and the protruding portion of bone replaced; the limb was afterwards lightly enveloped in a roller, and laid in an easy position on a pillow; the bandages kept wet with a lotion of acetate of ammonia and water, made by mixing two parts of the latter with one of the former. A dose of infus. sennæ, ℥iss., and sulphate of magnesia, ℥ss., was given him. On the 30th, the arm was considerably inflamed and swollen, upon which the bandages were removed, and the limb again placed on a pillow,

as before. A cooling lotion of acetated ammonia, rectified spirits of wine and water, was ordered to be kept continually applied to the arm, by means of pledgets wetted with it. A powder, of calomel, jalap, and ginger, was given him, and a draught of acetated ammonia, ℥ss., camphor mixture, ℥iss. was ordered three times a day.

Dec. 1. Very restless all night; complains of great pain in the wound, extending upwards and downwards, but mostly in the former direction, towards the axilla; pulse 72, rather full; tongue a little furred. The wound has assumed the appearance of incipient gangrene—its edges appearing of a dark red or livid hue; in consequence of which, the fermenting poultice was applied; but being found too irritating, an emollient poultice, frequently renewed, was substituted. He was ordered the following medicines:

℞. Tinct. Cinchonæ, ℥ii.
Liq. Ammon. Acet. ℥iii.
Decoct. Cinchon. ℥viii.
Fiat haustus sextis horis sumendus.

℞. Pulv. Antimonialis, gr. ii.
Hydrarg. Submur. gr. i.
Pulv. Opii. gr. i.
Fiat pilula omni nocte sumenda.

2. Passed a tolerable night; tongue cleaner; pulse 75, and fuller; pain in the wound diminished; inflammation of the arm reduced; poultices, lotion, and medicines to be continued.

3. Much the same as yesterday; pain and swelling somewhat mitigated. The same treatment continued. From this period the patient had no bad symptoms.

Dec. 3d.—J. J. aged 34, was brought here this day in consequence of a considerable hæmorrhage from the vagina and uterus. It appears, from her own account, that she was standing on a chair for the purpose of hanging up some linen to be dried; that the chair fell from under her, and that one of its legs entered the vagina. Several pints of blood, it is said, were lost before she was sent here; and it must be confessed her clothes bore evident marks of the truth of the statement; yet she was in no degree faint, nor did the pulse indicate any such a loss. It was about 65, tolerably full, and quite regular. The perinæum was not ruptured, nor was there any appearance, either externally or internally, within the reach of the finger, to account for the sudden loss of so much blood. The hæmorrhage stopped entirely soon after her admission into the Hospital. The only means employed were the application of pledgets, dipped in cold water, to the parts externally, and occasionally injecting a small quantity into the vagina. In the evening she complained of great pain about the umbilicus. A purgative draught was ordered her.

Dec. 4th.—Has slept tolerably well; pulse 60, and not

so full; the labia and neighbouring parts swollen and inflamed; uses a lotion of vinegar and water, which is frequently applied; says she has been three months pregnant. This patient has had no unfavourable symptoms since.

Various Games adapted for the Members of the Medical Profession.

To the Editor of THE LANCET.

Mr. EDITOR,—I admire the discretion which has induced you to introduce, into your well-conducted publication, lessons in chess for the purpose of insinuating under the guise of that game the maxims of the therapeutic art—

—— "ut pueris olim dant crustula blandi
Doctores elementa velint ut discere prima."

It is well known that Podalirius and Machaon played at chess at the siege of Troy with Palamedes, the inventor of it. I have to suggest, however, that you should not confine yourself to chess alone, especially as it is a game of skill merely, but should extend your amusing and useful labours to other games, which bear a stricter analogy to the *Ars Medica*.

I need hardly mention *Draughts*, for their extensive utility; they are certainly among the *prima elementa* of the general practitioner.

Push-pin manifestly tends to increase the *tactus eruditus*.

Dominos inculcate the necessity of the juxta-position of similar parts, and give warning of the evil consequences of a solution of continuity. They form an evidently sanative game.

Nine-pins and *bowls*, from their very forms, like two-ounce phials and pills, are evidently intended to do honour to medicine.

The various games of *cards*, however, seem particularly designed for the use of medical practitioners, and may be called the microcosm of medicine. In *Whist* there is the necessity of *cutting*, which involves much chirurgical knowledge; and *shuffling*, which is useful in all branches of the profession. The good player will rely more on *tricks* than on *honours*. The propriety of never omitting to call, is inculcated on the physician, while the maxim of returning your partner's lead, adumbrates that good understanding between *Doctor* and *Apothecary*, which may be termed the *Holy Alliance of London Practice*. Some practitioners have played well at *Matrimony*. *Pope Joan* conveys a curious historical fact, and may thus increase the general knowledge of the student.

There is a game mentioned by Doctor Rabelais, under the name of *Flux*, which I am ignorant of; but I doubt not, if it were investigated by your learned collaborators, it would throw light on the nature of cathartics. The same astute physician mentions the game of *Pille*; but the word, with him (in French), is not taken

in the sense of *pilula*, but is the imperative of *piller*, to *rob*, *strip*, or *pillage*. In English it might be called *bill*, and refers to the mode of making a *charge*.

Blind Hookey, the cœca rapacitas of the Latins, is a game venerable for its antiquity, and truly medical.

Put the fool to bed, is a game little used; but it conveys an useful instruction as to the mode of dealing with a patient. *Sed quid plura* de hoc joco addam?

H.U.M.D.

K endis Decembris.

COMPOSITIONS OF QUACK MEDICINES.

Jesuits' Drops.—Gum guaiacum, one pound; Peruvian balsam, three drachms; rectified spirits of wine, two pounds and a half.

Radcliff's Purging Elixir.—Tincture of aloes, two pints; tincture of jalap, tincture of gentian, of each eight ounces; proof spirit, two pints; scammony, jalap, and senna, in powder, of each four drachms.

Ward's White Drops.—Quicksilver, four ounces; spirits of nitre, one pound; dissolve; add prepared ammonia, seven ounces; evaporate and crystallize; then dissolve each pound of salt in three pints and a half of rose water.

Gowland's Lotion.—Bitter almonds, one ounce; sugar, two ounces; distilled water, two pounds; grind together, strain, and add corrosive sublimate, two scruples; previously ground with rectified spirits of wine.

Jackson's Itch Ointment.—Hog's-lard, palm oil, sulphur vivum, white hellebore powder, of each an equal quantity.

Oxley's concentrated Essence of Jamaica Ginger.—Ginger, two ounces; rectified spirits of wine, one pound.

Godfrey's Cordial.—Venice treacle, ginger, of each two ounces; rectified spirits of wine, three pints; oil of sassafras, six drachms; water, three gallons; treacle, fourteen pounds; tincture of opium, four pints.

LECTURE XVI.

Injuries of the Head.

BEFORE I proceed to mention these, I will give you a brief account of the nervous system; a correct knowledge of which, however, can only be acquired by assiduity in the dissecting-room. The nervous system is composed of the following parts, viz., brain (which is divided into cerebrum, cerebellum, and medulla oblongata,) medulla spinalis, and two sets of nerves—one set issuing from the brain, and the other from the medulla spinalis. Besides these, there is also the

grand sympathetic nerve, which may be said to form a complete system in itself.

The nerves are freely distributed to every part of the human frame, and are the means by which all voluntary and involuntary motions are maintained. It is impossible that a mere description of the nervous system, in this place, however minute it might be, could make you sufficiently acquainted with its anatomy; for this can only be obtained by the most careful and attentive examination of the dead body. It is necessary, however, for you, at this moment, to bear in mind, that an immediate communication exists between the stomach and brain, by means of the eighth pair of nerves, or par vagum; for unless you do this it is probable that an important symptom, which I shall presently mention, attendant on injuries of the brain, will be but imperfectly understood. There is also another circumstance connected with the brain, to which I wish particularly to direct your attention, viz., its being the vehicle of the mind; or, rather, I might say, the medium through which the mind is communicated. The influence of the brain on the mind, and *vice versâ*, will be amply demonstrated to you as I proceed.

Now, when the brain receives an injury, the symptoms stated to be the result of that injury are, general loss of sense and volition, if the injury be considerable; but if not so severe, some portion of sense and volition will remain; for example, when you are called to the bed-side of a person thus situated, you find him to be what is termed comatose. If you speak sharply to him, he becomes roused for the moment, mumbles some brief answer to you, again lays down, and relapses into his former sleepy state: thus you observe partial mental faculties and volition still remain. This state you should minutely note, as it will greatly assist you in your after diagnosis; and you must be upon your guard that you are not deceived here; for a man in this condition very much resembles one in a state of intoxication; and this similitude often proves exceedingly harassing to the surgeon. He is probably sent for to a person who, it is stated, has received a severe injury of the head. He finds him with a very severe laceration of the scalp, together with stupor, and sometimes even stertorous breathing. Not knowing that

the individual was intoxicated at the time of receiving the injury, the surgeon attributes the above symptoms to concussion or compression, when, after a few hours, the person recovers from his drunken fit, and it becomes apparent that he received no other mischief than a wound in the scalp.

In addition to loss of sense and motion, the fæces involuntarily pass off, from the sphincter ani losing its retentive power through the sympathetic influence of the great sympathetic nerve—the voluntary power of the bladder becomes for the time extinct—the urine is retained, and you are obliged to pass a catheter for its removal at the very time when the escape of the fæces cannot be controlled. But the involuntary functions of no organ are so soon affected by injuries of the brain as those of the stomach; this arises from the connexion before explained to you; vomiting, therefore, is one of the first symptoms; though the fæces pass involuntarily, yet there is such torpor of the intestinal canal, that purgatives will not easily excite action, and there will be found considerable difficulty in procuring evacuations; the pulse is said to beat laboriously; for the heart being affected, it cannot readily get rid of its contents. The pulse, however, is not slow unless the body be at rest: for upon the slightest exertion it becomes exceedingly quick; the pupils are dilated, and there is sometimes bleeding from the nose, which, when the patient has been kept lying on his back, often occasions vomiting of blood; when the injury has extended to the basis of the skull, producing fracture there, it is generally attended with bleeding from the ears. These cases are very dangerous, and persons usually fall victims to them. In addition to the symptoms already enumerated, there is often partial paralysis or hemiplegia; squinting is occasionally produced; the natural direction of one or both eyes becoming changed; permanent, partial, or total aberration of the mental faculties may also be added to the consequences already enumerated, arising from injuries of the brain.

When asked to explain the difference between concussion and compression, you answer, concussion is simply a shock which the brain has received, more or less severe, attended with laceration or not; and compression arises from either a depressed portion of bone,

Concussion

the extravasation of blood, or the formation of matter: and from whichever of these it springs, the symptoms will be the same.

In describing the symptoms and treatment of these diseases more particularly, I will first begin with *Concussion*. When called to a person whom you find in a state of stupefaction, but not to a great degree; regular pulse, tranquil and regular breathing; and the accident has existed some hours, you will generally be justified in pronouncing that the injury has been trifling: but when the individual has been first seized with vomiting, is incapable of using any muscular power from loss of nervous influence; a total aberration of the mental faculties; with intermittent pulse and breathing, these will be found the diagnostic symptoms of severe injury, and the case a dangerous one. In simple concussion, where the derangement is not so extensive as that just described, and where the patient upon being spoken to raises himself as if awoke from a sound sleep, and where some power of volition still remains, you will find one of the best diagnostic symptoms to be the accelerated action of the pulse upon the patient exerting himself; a man in this state with a pulse at 70, on being raised or attempting to walk, will have it inordinately quickened, it will instantly beat 130 in a minute; this is a never-failing symptom, and where the patient can be made to exert himself at all, will be found a sure characteristic of the disease. There is also in these cases a greater action of the carotids than in health; they beat more violently, though not more quickly, if the patient be at rest; if asked what are the best marked symptoms of concussion, I should say this increased motion of the carotids; the apparent tranquil sleep; the instantaneous relapse to that state after having been roused; the remarkable excitement of the pulse upon using exertion, and the insensibility having immediately followed the injury.

The diminution of the operations of the mind is often so great in concussion, even where considerable voluntary motion remains, that you cannot, even by hallooing as loudly as you are capable, get any other answer from your patient, than 'eh!' delivered in a gruff under-tone.—I have known several very curious circumstances of this kind;—one

case was that of a gentleman who had met with an injury of the head, by which concussion had been produced—every endeavour to get a word from him was ineffectual; yet, at one period, when the attendants were all absent, he got out of bed, bolted the door, made water, and returned to his bed again, in the same manner as though he had been in perfect health: when the servant went back, he found the door fastened; all their knocking was unavailing; they were obliged to break it open, and then could not procure from him a single word. Indeed, I do not believe the noise of an earthquake would have succeeded in rousing him from his lethargy; yet he could get out of bed, pass his urine, and adopt his ordinary habit of delicacy, by bolting the door.—I have caught a man when labouring under the effects of concussion, with his feet in a chamber-pot, and by the action of his hands, it was evident that he was trying to throw water over his legs; upon the servant going into the room of the same individual, some days after, he was found to be attempting to shave himself, and having no lather, he substituted a pot of spermaceti ointment, which he had brushed allover his face.

I suppose you have all heard of the extraordinary change which the memory sometimes undergoes from the effects of concussion. The first story of this kind that I ever heard, was from Mr. Cline. A man was taken to Guy's, in a state of insensibility, in which condition he remained for some time, but at length recovered; and when he did so, no person in the Hospital could understand his language; a milk-woman happening to go into the ward one day, heard him, and discovered that he was speaking Welsh: he told her that he knew English well before the accident, but after it all knowledge of that language was obliterated from his mind. It had been recently acquired; the impression was less strong, and consequently the more easily effaced.

I witnessed a similar circumstance in the case of a German, who was a sugar-baker in this town, and who had compression of the brain arising not from any injury by violence, but from pressure in consequence of the formation of matter. This man could speak English extremely well before the compression; but as the compression increased

from the accumulation of matter, he lost his English entirely, and I could only communicate with him through the medium of an interpreter. At last he lost the power of speaking even in his native language, and he died in consequence of the accumulation of matter. It is curious to observe the gradual change which takes place in the intellectual faculties, as alterations occur in the brain; and the gradual diminution of ideas which have been more recently acquired, until at length they become totally obliterated. Old persons are observed to be fond of relating anecdotes of their youth, forgetting incidents of more recent occurrence; and the change which takes place in the intellect from injuries of the brain is very similar to the effects of age. The patient becomes, as it were, suddenly old; loses impressions of a recent date, and is sensible only of those which he has received in his earlier years. Such is the state of mind is very frequently produced by compression of the brain.

With respect to the state of the brain under concussion, when the concussion is not extremely violent, there is merely a change in the circulation of the brain.

A sudden shock will so far disturb the circulation of this organ, as to produce diminution of the powers of the mind, as well as to impair the functions of the body. I shall have occasion to mention to you a most extraordinary case, in which the functions of the mind were suspended, from an interruption of circulation in the brain, for upwards of thirteen months; the patient having, as it were, drunk of the cup of Lethe during all that period. Any change of the circulation in the brain alters, in some degree, the powers of mind and body; but if the agitation be very considerable, the powers of the mind will be for a time suspended. Thus, when a person is said to be stunned, there is a sudden alteration of the circulation in the brain, and a corresponding loss of sensibility; but when the circulation is restored by the means which I shall presently point out to you, the powers of the mind return with those of the body. When the concussion is very violent, a lesion of the brain takes place; but when it is slight, no appearances can be discovered on dissection which indicate any alteration of structure. A person may die from another injury, accompanied with concussion;

and on examination after death, not the least alteration may be found in the brain. This is not the case, however, where the concussion is violent. I have before me a great number of preparations, from the brains of patients who have died of concussion, in most of which that organ was considerably lacerated, and some extravasation of blood is observable within the brain. (Several beautiful specimens of lacerated brain, accompanied with extravasation of blood, were exhibited to the class.) These specimens show the effects produced by severe concussion. I remember a case of a gentleman, an intimate friend of the late Lord Nelson, who fell from his horse at the corner of St. Thomas's-street, in the Borough. He was immediately taken to Guy's Hospital, where he was found to have all the symptoms of concussion, and he was treated in the usual manner. On examination of the body after death (for he died eight days after the accident), the brain was found to be lacerated in several places, and considerable extravasation of blood had taken place. In general, therefore, when the concussion is slight, there will be only an alteration of circulation in the brain; but when it is severe, there will be laceration, accompanied with extravasation of blood, and the symptoms will be found to run into those of compression. The first case in which I ever saw the brain lacerated from concussion, was one which occurred at the other Hospital, in the first year of my apprenticeship, when I was a dresser to Mr. Chandler. As this was the first case of the kind I had seen, I preserved a portion of the brain. The patient had lost the power of speech from a blow on the head; but there was no appearance of any wound or injury to the skull. Mr. Chandler attributed the loss of speech to concussion. On examination of the body after death, it was found that the anterior lobe of the cerebrum was torn, the first effect of which injury was the loss of the power of utterance, or rather a paralysis of the muscles, which deprived him of the power of speech, and subsequently compression and inflammation, of which he died. When you are asked, then, as to the effects of concussion, as they may be collected from the appearances on dissection, you will answer, that when the concussion is slight, it is merely an agitation of the brain, by which the circulation is altered; but when it is severe, the brain it-

self suffers laceration, which laceration is accompanied with extravasation of blood. By the knowledge of these facts we are led without difficulty to the principles of treatment.

Treatment of Concussion.—The great danger which we have to guard against, in the treatment of concussion, is inflammation of the brain. This principle must direct our practice; and in order to prevent inflammation, we must take away a very considerable quantity of blood. By bleeding largely at first, we not only remove existing inflammation, but we prevent that which would otherwise occur. This practice, however, may be carried to excess. There are some persons who say you cannot bleed too much in these cases; but such an assertion only proves their want of understanding. You must regulate your conduct by the symptoms; observe whether there be any hardness in your patient's pulse, and whether he complains of pain in the head, if he have still the power of complaining; watch your patient with the greatest possible anxiety; visit him at least three times a day, and if you find any hardness of the pulse supervening after the first copious bleeding, take away a tea-cupful of blood; but do not go on bleeding him largely, for you would by this means reduce the strength of your patient too much, and prevent the reparative process of nature. It is necessary that there should be a slight degree of inflammation, for without this, the reparative process cannot go on, and the patient cannot recover; but it will be your duty to keep this inflammation within due bounds. I shall mention a case in which fatal consequences ensued from the error commited by the surgeon in bleeding his patient to such excess, that the slight degree of inflammation necessary to the process of adhesion was removed, and the reparative process of nature consequently prevented.

In these Lectures, Gentlemen, I feel it to be my duty to describe to you Surgery as it is, and not in the glowing colours in which it is painted to you in books. You must be content to practice Surgery as it is,—not as it is sometimes fallaciously represented to you. I am most anxious that you should omit nothing which may contribute to increase your professional skill, and enable you to afford the greatest possible sum of relief to the sufferings of your patients; but they who

blazon forth our profession, as one which is attended with undeviating success, are only deceiving you. You must hear the untoward cases of your profession, as well as those of which the issue is favourable, in order to form a correct judgment in your minds of what your profession really is. It is for these reasons, Gentlemen, that I shall never hesitate, *coute qui coute*, to detail to you, and perhaps to the public, those cases which have terminated unfavourably. I have a duty to perform, and I shall never shrink from the discharge of it. It is by detailing to you the unfavourable as well as the favourable cases, that I can alone perform that duty; for it is by such a course alone that I can point out to you the rocks which you are to avoid, as well as the haven in which you are to endeavour to anchor. The case to which I last alluded, was one of concussion, accompanied with slight laceration of the brain, which occurred in the other Hospital. The gentleman under whose care the patient was, thought it right to bleed him, and that he could not bleed him too largely. He accordingly bled, not only from day to day, but twice a day. The consequence of this mode of treatment was, that the patient became perfectly pale, was in a state of considerable dejection, not of the mind, but of the powers of the body, and died without any symptoms of inflammation, ten days after the injury. On examination of the body, it was found that there was a slight laceration of the brain, with some degree of extravasation of blood, but that not the slightest attempt had been made by nature to heal the wound. You are aware that the brain heals, like any other organ, by the process of adhesion; but in this case, the quantity of blood taken from the patient was so large, that the slight inflammation necessary to the adhesive process was removed, and the process of restoration consequently prevented. Still it is often necessary to take away blood, after the first large bleeding; but it must be taken in small quantities, and you must watch the patient with the greatest possible anxiety, for the symptoms can alone regulate your practice. Sometimes it is necessary to take away large quantities of blood. I was called to a gentleman who had fallen from his horse in riding to London. I found him insensible on my arrival. Mr. Constable, who attended him, had already bled him, but I indeed it necessary

to bleed him again largely; and I took blood in smaller quantities from him day after day, watching the pulse with the greatest anxiety, and bleeding him only so far as to reduce the hardness of the pulse without diminishing too much the powers of his body. The whole quantity of blood taken from this gentleman, by bleeding from the arm, opening the temporal artery, and the application of leeches, as far as this could be estimated, amounted to about two hundred and eight ounces of blood. One hundred and eighty ounces were taken from the arm; yet such was the hardness of the pulse, that at the last bleeding there was some degree of inflammation of the brain indicated.

You are to use bleeding as a means of preventing inflammation; but you are not to resort to it as a matter of course, the moment you are called to a patient under concussion. A man falls from his horse, and the instant he is picked up from the ground, some surgeons think it necessary to take the lancet from their pocket. This conduct is quite irrational; for suppose the pulse could scarcely be felt at the wrist of the patient, and the surgeon were in such a case asked why he proceeded to bleed; what would his answer be? The probability is, that he would have no answer at all ready; or he would perhaps say, that he bled him because the accident had brought a great quantity of blood to the brain, as if the shaking of the head could have any effect in producing a determination of blood to the brain. It is not with this view that we bleed in concussion, but in order to prevent inflammation. I have seen many a patient who would have died if a large quantity of blood had been taken at the time of the accident. This was the case with the gentleman who was attempting to shave himself, whose symptoms I described to you this evening. When I first saw him, his pulse was scarcely perceptible. I took a little blood from the arm, and he was immediately seized with convulsions, like an epileptic fit, which I thought would have proved fatal. I closed the wound, and I would not upon any account have taken six ounces of blood from him at that moment. Some time ago I saw a man, at the other Hospital, who had received a blow on the head. He was pale and dejected, and his pulse could scarcely be felt. I said to the dresser you must not bleed this man at present;

there is rather too little action than too much. Wait till the pulse rises, and then bleed him. In the evening reaction took place; the pulse rose, and the dresser then very properly bled him. Inflammation was by this means prevented, and the man did well. The principle upon which you should act, Gentlemen, is never to do any thing in your profession without a good reason, which, whatever may be the result of the case, will leave your conscience clear. A surgeon who bleeds without being able to assign any other reason than that his patient has received a blow, is not fit to practise his profession.

The next remedy I come to is EMETICS.

I must say that I have seen emetics of considerable use; the vomiting produced by them does good. I have always considered the efforts of Nature to relieve herself after injuries salutary; and thus the vomiting which is excited in cases of concussion, acts beneficially by relieving the stomach of its contents, as the accident generally happens to persons in a state of intoxication; and also by propelling the blood to the brain, and thus restoring the powers of life. But the vomiting excited by Nature restores the patient to his senses for a short time. He is sometimes relieved, but without continuing so long;—he looks about, and lapses into his former state of aberration of mind, from which he had received merely a temporary relief. When emetics are exhibited as a remedy in concussion, there is only one thing that I fear from their use, when there is any extravasation of blood in the brain; or any tendency to apoplexy, then they should be employed with caution; and it is on that account that I wait for three or four hours after the accident before I order them.

With respect to the exhibition of cathartics, the bowels should be kept open by calomel purges, followed by the infusion of senna and sulphate of magnesia. The calomel should be given about two hours after the accident; and it will be useful to give to the patient at the same time a quantity of mild fluids to drink, as by this means a disposition to purging is kept up, counter-irritation is, as it were, produced, and the blood is drawn from the brain to the intestinal canal. Submuriate of mercury, with lemon juice squeezed in water, should be given. Perspiration on the surface of the body is very desirable, and for this purpose antimonials are em-

ployed. The pulv. Ipec. Com. (Dover's Powder) is not generally used to produce moisture of the skin, on account of the opium it contains, as it confounds the judgment, and prevents your seeing what are the effects of the opium, and what those of the disease: for opium produces the same disturbance to the brain as takes place in concussion; therefore it is not often employed. Counter-irritation is of use, but not until other means have been resorted to; the object of blisters is to subdue the inflammation when other means have failed. I have known a patient, with pain in the head, sickness at the stomach, loss of strength, and throbbing of the carotids, who had been often relieved by blood-letting, for about two hours only after it was done. A person under such circumstances, I have known benefited by the application of a blister; on the principle not of increasing but subduing action, from an excess of which the ill consequences are to be feared.

For the spmptoms after concussion, the trephine used to be employed; but it now becomes a question, whether it ever ought to be resorted to a a means of relief under those circumstances? To this I say, if you were to trephine, you ought to be trephined yourselves in turn *(a laugh.)* What will trephining do? Probably great harm by disturbing the brain; and if not, no good can possibly result from it. Now for the proofs: first, that it does no good. Gentlemen, I never lecture to you but from the recollection of some case that has occurred to me. I was very intimate with a Mr. T., of Yarmouth, where I used to spend a good deal of time when a boy; after my apprenticeship was finished, I went down to this place, and I found Mr. T. labouring under the effects of concussion; his mind was not in the least affected; he had received a blow on the forehead from a bludgeon, and he was afterwards frequently seized with sickness at the stomach. I called on him: and when I went into the room, I said, I came to ask you how you are: in approaching me he was obliged to put his handkerchief to the mouth to prevent the contents of his stomach going over me. In his walks he had frequent vomitings: a relation who was at Yarmouth twelve months after this, said to him, that he had better have the trephine applied, and the portion of bone removed; to which he readily

consented. After the operation his symptoms were not relieved; he remained just the same; or I should rather say that he was not relieved, for he did not continue long in the same state; he soon got worse and worse; his bowels became costive, the powers of the mind affected, and he died in consequence of the operation, though he had lived two years after the injury, before it was performed. Mr. B., now in Yarmouth, was living with him at the time, and he could tell more of the particulars than myself; but this I know, that he was not benefitted by the operation, but injured by it. But for a more direct proof that it is dangerous: Dr. Farre told me that he knew a person who was subject to epileptic fits after concussion of the brain, and that he was extremely anxious to be trephined. The operation of trephining was performed, and he died soon afterwards. Do not think, Gentlemen, that I mention this as an uncommon case; but this used to be the plan adopted with almost all the patients admitted into these Hospitals during my apprenticeship; they were all submitted to the operation; inflammation of the membranes of the brain supervened, and nearly all died; recovery being very rare. But do our patients now die from the effects of concussion? No; by bleeding and depletion we rarely lose a patient; perhaps we have fallen into the contrary extreme. After the expiration of my apprenticeship at these Hospitals, I went over to Paris to see the practice of Desault at the Hotel Dieu; and there I found that never, under any circumstance whatever, did he trephine; and that he was more successful than those who were constantly doing it here. Trephining in concussion is now so completely abandoned, that in the last four years I do not know that I have performed it once; whilst thirty-five years ago I should have performed it five or six times a year. But I believe that I have omitted one circumstance; and that is to tell you to pay strict attention to the mind; excessive anxiety must be prevented; for if you suffer the mind to be disturbed, you do little or nothing towards the recovery. I was very much struck, about twelve months ago, with an instance of this: a boy was brought to me from the north of England who had lost a portion of the skull just above the eye-brow; and I was asked (for it was for this purpose that I was consulted),

what protection should be given to the denuded brain? On examining the brain, I distinctly perceived the pulsation was regular and slow; but at this time he was agitated by some means or other; directly, the blood was sent with increased force to the brain; the pulsation became more violent; therefore, if you omit to keep the mind free from agitation, your other means will be unavailing.

Lastly, the treatment of Children. As you cannot always bleed them from the arm, you must give the submurias hydragyri (calomel), with mild drink, so as to purge them; leeches must be applied to the temples: you must open the jugular vein.—For the symptoms after concussion, as pain in the head, or sickness at the stomach, you must make an incision through the scalp; put issues in; wash the head with spirits of wine and water, for this is better than any thing else I know; and use the shower-bath two or three times. These are the best means for giving power to the nervous system, and bringing the action of the brain into a healthy state.

Lecture XVII.

We are this Evening to consider, Gentlemen, Compression of the Brain, the causes which give rise to it, its symptoms, and the treatment which it requires.

When a person is labouring under compression of the brain, it is known by the breathing being stertorous, the pulse slow, and the pupils dilated; to which may be added the symptoms of concussion; when you then find a patient with the apoplectic stertor, slow pulse, dilated pupils, it will generally happen that the brain is compressed. The causes which produce compression are three: 1. Extravasation of blood; 2. Fracture with depression; 3. Formation of matter within the skull; these are the three causes which give rise to compression; we shall first consider compression when produced by extravasation. Now, Gentlemen, when the brain is compressed by extravasated blood, the symptoms do not directly occur; the person at the time of the injury is often stunned, recovers himself, and a short time after falls into a comatose state, and then the apoplectic stertor begins. I will relate to you a case to illustrate this: A child was playing on a table from which it fell on a stone floor, and received a severe blow on the head, which

Concussion with Extravasation

caused compression of the brain; the child appeared to recover at four in the afternoon, the time at which the accident occurred being one; pain still continued in the head, the child cried considerably; it went to bed about two hours before its usual time; during the night, the servant was disturbed by the apoplectic stertor of the child, which prevented her from sleeping; when she moved it, the child was not roused; she discovered that it was ill, alarmed the family, and at eight in the morning it died: it was found after death, that a considerable quantity of blood was extravasated in the brain. The son of a most respectable merchant of the city was driving to his country house at a short distance from town, in a one-horse chaise, when he was thrown out, and pitched with his head to the ground; he was stunned by the fall; he recovered a little, but looked very pale; he said that he was much hurt; a friend who was with him drove him home; in the evening he felt very heavy, laying the head on his hand; symptoms of compression of the brain came on; ten p. m., the family was alarmed; medical assistance called, but at two the following morning he died, all efforts to save him being unavailing.

Extravasation with concussion renders the case of a different nature; then the symptoms of concussion, such as I described to you on a former evening, come on first, and the apoplectic stertors and other symptoms of compression succeed. Now for a case: A gentleman was at a party with some friends. He drank freely of wine, and became inebriated. His home was some distance from the place at which he was spending the evening; and his friends seeing that he would be exposed to great risk, wished him to stop, but he could not be prevailed on. He mounted his horse; and on the way was thrown off. He returned home; fell into a comatose state; symptoms of concussion first came on, loss of voluntary motion, at first no appearance of extravasation of blood was present; two, the following morning, apoplectic stertor came on, and at eleven he died. In this case, symptoms of concussion came on first, and those of compression afterwards. Blood was found extravasated in the brain, as might be expected. It is found, Gentlemen, that the extravasated blood, producing compression

of the brain, is generally situated in three different parts:—First, between the dura mater and pia mater. Second, between the pia mater and brain. And, lastly, within the substance of the brain itself. In this case (Sir Astley pointing to a specimen on the table before him,) there was a considerable quantity (three ounces), the largest I ever saw effused beneath the dura mater. In this also (pointing to another) there was a large quantity extravasated opposite to the anterior inferior angle of the parietal bone and meatus auditorius externus; and the dura mater itself was torn. Second, between the pia mater and brain: this is of more common occurrence; and in this case a large portion of the brain will often be found covered over with blood, not that the quantity of blood extravasated is considerable, but a little is diffused over a large space. This portion of brain before me was taken from a man who fell, I believe, from the yard-arm of a ship, and who was carried to the other Hospital (Guy's), he died four hours after his admission; and on examining after death, the vessels going from the pia mater to the brain were completely torn through. Third, within the substance of the brain itself; this (alluding to a specimen on the table) was taken from a person in the city, who had extravasation within the brain, from an accident; after the injury he considerably recovered, though pain still continued in the head; in three months afterwards he died, and on examination there was found in the anterior lobe of the cerebrum a coagulum of blood, no portion of which had been absorbed, as the surfaces close to the brain were quite smooth. These are the three situations in which extravasated blood is principally formed. I do not find any difference of symptoms produced by the different situations of the blood; the compression is produced by the pressure of the blood, and the quantity of blood effused will depend on the size of the vessel of the dura mater that is divided: whatever is the situation then of the blood, the symptoms of compression are the same: if there should be any blood resting on the origin of a nerve, there will be partial paralysis of the part which that nerve supplies. In the treatment of these cases there is little to be done. If extravasation of blood occurs with fracture, trephining may be of use. You should deplete

freely, for the purpose of preventing inflammation: irritation is to be lessened, the bowels are to be opened, and the patient kept very quiet. If there is a bruise near the fracture, indicating the spot where the effused blood is, you may trephine, that is, before symptoms of excitement come on: when they take place, you must deplete only, and not dream of performing the operation; to do it under such circumstances would be highly absurd, and the height of madness.

OF FRACTURES OF THE SKULL.

Fractures of the skull are not of themselves dangerous, nor are they injurious to the brain; therefore these fractures do not call for any alarm, if care be taken to prevent the inflammation; the danger in these cases is to be apprehended from disturbance in some distant part, irritation of the system, or extravasation; it is not then, I repeat, from the fracture itself that the danger is to be apprehended, but from compression of the brain, extravasation of blood, or irritation in some distant part; therefore, when called to a case of fracture of the skull, you do not operate, but consider the symptoms that are present, endeavour to ascertain from what they arise, and then regulate your treatment accordingly; if the symptoms are those of concussion, the treatment must be directed to it; if those of extravasation of blood, and there is not much excitement, it will be necessary to remove a portion of bone; but if there be fracture only, without any of the symptoms above mentioned, there will be no occasion to operate.

Fracture of the base of the Skull.

When a fracture occurs at the base of the skull, it is much more dangerous than at any other part, because extravasation of blood is much more likely to take place, or if not, inflammation of the brain, from the violence of the injury received, very often supervenes. The mode in which these fractures are produced, is by falling from a great height on the summit of the head: when all the weight of the body rests on the foramen magnum, and cuneiform process of the os occipitis, great injury is in this way done; as in very many cases a transverse fracture through the foramen magnum,

cuneiform process, and part of the temporal bone, is the consequence; a discharge of blood into each meatus auditorous takes place, and where there is no other mischief, deafness often remains for life. A curious fracture within the orbit sometimes occurs, as in the case from which this specimen (pointing to one on the table) was taken, when destruction of life was the consequence of the injury received. I will give you the history of the case: A child was playing with a scissors, when the point of it entered the upper part of the orbit, between the ball of the eye and the superior eye-lid; the scissors was with difficulty extracted; the child's eye did not become inflamed; after the accident the child walked from Walworth to Mr. W., of Hatton Garden, who attended it; on the 10th day from the time of the mischief, symptoms of compression of the brain came on, rigors, inflammation of the brain supervened, and the child died; on examining the body after death, it was found that the scissors had penetrated through the orbitar process of the os frontis, and lacerated the dura mater; a considerable quantity of extravasated blood was found, and the anterior lobe of the cerebrum was punctured by the point of the scissors, from which it had received the injury.

It now and then happens that a blow received upon the summit of the head will produce a circular fracture of the entire cranium, commencing at the top of the head, passing down on each side through the temporal bone, and meeting at the basis.—Mr. Chandler, late Surgeon of this Hospital, had a case of this description; there did not appear to be any extravasation or concussion; great irritation and violent inflammation succeeded, which destroyed the patient; and after death, it was discovered that there existed a complete circular fracture of the skull, and that the anterior portion could be freely separated from the posterior. I believe these cases always terminate fatally.

There is a curious fracture of the skull which occasionally takes place over the frontal sinuses. When the fracture is simple, if the nose be blown, the air escapes through the opening in the bone, and getting into the cellular membrane under the skin, renders the forehead emphysematous. If, on the other hand, the fracture is compound, upon blowing the nose, the air rushes

through the wound; so that, in either case, the nature of the accident may be easily ascertained.

Fractures of the skull, if unaccompanied with concussion or compression, as readily unite as fractures of the bones in any part of the body. Here is a curious case (exhibiting a skull), where a circular, or rather oblong, piece of bone was, as you may perceive, completely separated from this part of the os parietale by the cut of a sabre; and yet, from what you here see, it is evident that it became reunited. However, I will send it round, that you may have an opportunity of examining it for yourselves. Fractures of the cranium, therefore, easily unite. Where, however, large holes are made through the skull, the apertures do not again become filled by ossific matter, but by a tendinous structure formed from the bone and dura mater. The holes made in trephining are supplied in this manner, and not by bone. Also, when in fractures of the skull, where the bones are separated to any distance, the interspace will not become filled by bony matter, but remain open as you here see it, (showing a skull which had been fractured, and the broken part widely separated.)

Treatment of fractures of the skull is as follows: when there is simple fracture, unaccompanied with symptoms of injured brain, you must not trephine, neither in compound fracture; but you must, by the application of adhesive plaster, endeavour to heal the wound in the scalp as quickly as possible. Let your constitutional treatment be that of depletion, by means of blood-letting and purgatives. This plan often removes symptoms of concussion, and even extravasation, which accompany these fractures; and often a few hours will show you that the application of the trephine, which you at first might have thought indispensable, is wholly unnecessary. It is wrong, therefore, to be too much in a hurry in these accidents; for irreparable mischief might arise from your converting a fracture, which was simple, into one that is compound. Wait, then, Gentlemen, for awhile, before you operate in such cases, for the purpose of seeing what effects may be produced by bleeding and purgatives. It not unfrequently happens in these Hospitals, upon persons being brought in who have

received injuries of the head, that the dresser in attendance will bleed them immediately after their admission, and at the same time send off for the surgeon; before whose arrival, however, the good effects of loss of blood are apparent, and the symptoms of concussion, and even of extravasation, have often disappeared. This shows how necessary it is that you should not be too precipitate. If you act prudently, therefore, in these accidents, you will try bleeding and purgatives before you operate; and whether you do or not, the depletion will prove of the greatest possible advantage in preventing inflammation, and from which, if not kept within bounds, arises the principal danger.

The next subject to which I shall direct your attention, is *Fracture with Depression*. I will tell you what you ought to do in such cases, and then leave you to act for yourselves. In order to ascertain whether the symptoms arising from depression would come on immediately after the accident, I tried the following experiment: A gentleman having brought me a large dog, I applied the trephine to his cranium, and took out a portion of the bone. I then, with the handle of a knife, separated the dura mater from the bone: for I found that I could make no impression on the brain until I had done so, and then pressed upon it with my finger. At first the animal did not seem to feel it; but upon pressing more deeply, it produced pain and irritation, and he endeavoured to avoid us. Upon still increasing the pressure, he became comatose, and fell. I kept him in this state for five or six minutes, when, upon removing my finger, he got up, turned round two or three times from giddiness, and walked away, apparently little worse for the operation. A gentleman, who felt the animal's pulse during the continuance of the experiment, stated, that it became slower as the pressure became increased. In man it is the same—slow and labouring.

Dog

After blows have been received on the head, it often happens that upon making an examination of the scalp, there appears to be depression of bone to a great extent, when, in reality, there is none. Let me put you on your guard here. A person receives a blow on the scalp: the parts immediately surrounding the spot where the blow was received will rise, from the ex-

travasation of blood, two or three lines higher than the part itself; for there the cellular membrane having been condensed by the injury, will likewise tend to increase the deception: thus the surrounding parts are considerably higher than the middle; and the external character of the contusion is certainly calculated to deceive those who are unacquainted with the nature of these accidents. I have several times seen these affections; but the first case which I recollect was that of a child brought into Guy's, who had received a severe blow on the head from a brickbat, which had been thrown at it by a man. All present were prepared for the operation, fully expecting that I should apply the trephine; for they felt convinced that there was considerable depression of bone; and when I stated that I should not operate, they exclaimed, "Good God! I wonder what can be his reason." This child, after having been freely bled and purged, in two or three days quite recovered.

I have often been sent for by my dressers to these cases, and have been requested to bring my instruments with me; but upon examination have found that there was no depression of bone, and that the uneven appearance of the scalp was produced by the causes before mentioned.

It also very often happens in fractures of the cranium that considerable depression of bone will take place from the external table of the skull being driven into the diploe, and without producing the slightest injury to the internal table; do not, therefore, be precipitate in your diagnosis, nor hastily determine upon performing an operation, which you might afterwards have reason to repent: these fractures, however, can only occur in those of a middle age, for in the very young and in very old age, the skull is thin and without diploe. I believe in the course of my practice that I have frequently met with this accident, and we have many preparations in the Museum which clearly demonstrate their true character; but the three now before me (pointing to three skulls) are, I think, quite sufficient to satisfy your minds as to the nature of this accident; here you see the external table has been driven in, and yet no vestige of fracture in the internal; here is another specimen, with greater depression; and the third still more than either, yet the internal

plate is sound. I am not acquainted with the histories of these specimens, but it is evident that the persons recovered by the re-union that has occurred between the parts which were broken.

Suppose you are called to a patient who has had a severe blow on the head, and that, on examining the skull, you find a portion of bone considerably depressed. You may still find this man capable of giving a history of the accident, and that his mind is not at all affected. On the other hand, you may be called to a person who has a fracture of the skull with depression, and who has lost the powers of mind. In such a case, if the fracture is simple, and there is no wound in the scalp, and no symptom of injury to the brain, it would be the worst practice in the world to make an incision into the part, and perform the operation of trephining; for by making such an incision you add greatly to the danger of the patient, as you make what was before a simple, a compound fracture, and consequently greatly increase the danger of inflammation. Inflammation rarely follows fracture with depression, where the fracture is simple, but very often follows a compound fracture, which is produced by making an incision in the scalp. Never make an incision, therefore, when you can avoid it, or merely because there is fracture with depression, if there be no symptom of injury to the brain. Even if there be symptoms of injury to the brain, and the fracture be simple, do not immediately trepan. Take away blood, and purge your patient freely, and see how far the symptoms may be the result of concussion of the brain, and not of depression. If the symptoms do not yield to depletion, then, and not till then, perform the operation of trephining. I was called to a lady who had fallen against a projection in a wall in walking across her parlour. The *os frontis* was driven in, but there were no symptoms of compression of the brain. I bled her, and guarded cautiously against inflammation, but there was no necessity for elevating a portion of the bone. This lady never had any symptoms of injury to the brain, and she recovered by depletion alone.

The old practice used to be, the moment an injury to the brain was suspected, and the least depression of the bone appeared, to make an incision into the scalp. I have heard

of a dresser in these hospitals, who, having had no accident during his week, said, 'I will make a cut in the head of one of my patients with fracture, for he may perhaps have depression, and I shall in this way have something to do before my week is up.' This dresser ought to have had a cut made in his own head; he should have been cut for the simples. (*A laugh.*) This was putting his patient to considerable hazard; for the simple fracture would, by the incision, be rendered a compound fracture. In simple fracture, then, when it is attended with symptoms of injury to the brain, deplete before you trephine; and when it is unattended with such symptoms, though there may be depression, deplete merely, and never divide the scalp.

If the *fracture* be *compound*, the treatment must be very different, because a compound fracture is followed very generally by inflammation of the brain, and it will be of no use to trephine, when inflammation is once formed. It might be thought that it would be time enough to perform this operation when inflammation had appeared; but this is not the case, for if inflammation comes on, the patient will die whether you trephine or not, and you will be so far from arresting its fatal progress by trephining, that the operation will add to the danger of the inflammation. When inflammation of the dura mater and membranes of the brain has been excited by the depression of the bone, you cannot retard the progress to death, by performing the operation. These principles may be illustrated by many cases. During the first year of my apprenticeship in these hospitals, I saw two instances; one, in a patient of Mr. Cline's, and another in a patient of Mr. Birch's. Mr. Cline's patient was a man who came from Walworth, with compound fracture, from a blow on the head. A portion of bone had been forced into the cavity in the skull. Mr. Cline advised him to submit to the operation of trephining. The man said, 'You may do what you like; I am no judge, but you are, so do what you please with me.' Accordingly, he walked into the operating theatre to be trephined; the portion of bone was removed; he walked back again to bed, and never had a bad symptom. A short time after, a patient under Mr. Birch, with fracture and depression, was told that he was

in similar danger, and advised to undergo the same operation. He was, however, self-willed, and obstinately refused to submit to it. Eleven days after the accident, he was seized with pain in the head, and the symptoms of inflammation in the brain, and when he became insensible, the operation of trephining was performed; but it did not arrest the symptoms, and he died of the inflammation. In the other hospital two boys were admitted under very similar circumstances. The *os frontis* had, in one case, been broken by a kick from a horse, and in the other by a fall on the forehead. In the former case the portion of bone was raised, and the boy did well; but the mother of the other boy interfered to prevent the operation of trephining; and though it was performed after symptoms of inflammation had appeared, he died. It is quite true that it often happens that fracture with depression is frequently not followed by inflammation, even when the fracture is compound; but we cannot be certain of this, and if it does ensue, we cannot save the patient by trephining at a late period. The rule, therefore, which I always follow, is this:—When I am called to a fracture, with depression, which is exposed to view, I generally use an elevator, and very rarely the trephine. I put this instrument under the bone, raise it up, and if it has been comminuted, remove the small portions of bone. If, however, one bone is wedged within the other, I apply the trephine for raising the depressed portion of bone. The elevation of the bone is never followed by any mischief; but if you do not raise it, and inflammation follows, it will be too late to attempt to save the life of the patient.

I shall conclude, Gentlemen, by mentioning two other circumstances; but they are two circumstances to which, if there be any thing valuable in the lecture, I wish most particularly to call your attention.

The first is this: it sometimes happens, in fracture of the skull attended with depression, that a small spicular portion of bone will project into the brain, so as to produce and support epileptic symptoms. A negro, who was a patient of Mr. Birch, had fracture from a blow on the head, and a portion of the bone was depressed. Shortly after, he was seized with epileptic fits, which continued for many years. When he was admitted into

the hospital, it was found that there was still a portion of the depressed bone remaining, and the trephine was applied to it. When the circular piece of bone was completely sawed round by the trephine, so that it could be moved from side to side, Mr. Birch found a difficulty in raising it; he put the elevator under it, but still it adhered to something within. At last he took a pair of forceps, and, by using more force, he extracted a little spur or thorn, which had proceeded from the inner side of the skull through the dura mater into the substance of the brain, and was the cause of the epileptic fits. After its removal, he had but one more fit, and completely recovered.

The other circumstance which I shall mention is one, which, whether we regard it in a physiological or surgical point of view, is, perhaps, one of the most extraordinary that ever occurred; and, as connected with surgery and physiology, I am surprised it has not made a greater impression on the public mind than it appears to have done. A man was pressed on board of one of his Majesty's ships, early in the late revolutionary war. While on board this vessel, in the Mediterranean, he received a fall from the yard-arm, and when he was picked up, he was found to be insensible. The vessel soon after making Gibraltar, he was deposited in an hospital at that place, where he remained for some months, still insensible; and some time after he was brought from Gibraltar, on board the Dolphin frigate, to a depôt for sailors at Deptford. While he was at Deptford, the surgeon under whose care he was, was visited by Mr. Davy, who was then an apprentice at this hospital: the surgeon said to Mr. Davy, "I have a case which I think you would like to see. It is a man who has been insensible for many months; he lies on his back with very few signs of life; he breathes, indeed, has a pulse, and some motion in his fingers; but in all other respects he is apparently deprived of all powers of mind, volition, or sensation." Mr. Davy went to see the case, and, on examining the patient, found that there was a slight depression on one part of the head. Being informed of the accident which had occasioned this depression, he recommended the man to be sent to St. Thomas's Hospital. He was placed under the care of Mr. Cline; and when he was first admitted into this hospital, I

saw him lying on his back, breathing without any great difficulty; his pulse regular, his arms extended, and his fingers moving to and fro to the motion of his heart: so that you could count his pulse by this motion of his fingers. If he wanted food, he had the power of moving his lips and tongue; and this action of his mouth was the signal to his attendants for supplying this want.

Mr. Cline, on examining his head, found an obvious depression; and thirteen months and a few days after the accident, he was carried into the operating theatre, and there trephined. The depressed portion of bone was elevated from the skull. While he was lying on the table, the motion of his fingers went on during the operation, but no sooner was the portion of bone raised than it ceased. The operation was performed at one o'clock in the afternoon; and at four o'clock, as I was walking through the wards, I went up to the man's bed-side, and was surprised to see him sitting up in his bed. He had raised himself on his pillow. I asked him if he felt any pain, and he immediately put his hand to his head. This showed that volition and sensation were returning. In four days from that time the man was able to get out of bed, and began to converse; and in a few days more he was able to tell us where he came from. He recollected the circumstance of his having been pressed, and carried down to Plymouth or Falmouth; but from that moment up to the time when the operation was performed (that is, for a period of thirteen months and some days), his mind had remained in a state of perfect oblivion. He had drunk, as it were, the cup of Lethe; he had suffered a complete death, as far as regarded his mental and almost all his bodily powers; but, by removing a small portion of the bone with the saw, he was at once restored to all the functions of his mind, and almost all the powers of his body.

It appears, therefore, that in cases of depression we should not be prevented from trephining, however distant the period may be at which the accident occurred; and the patient may, after any interval, be restored to the powers of body and mind.

Mr. Jukes attended this evening with his elastic gum tube, and double tube stop cock syringe. At the conclu-

sion of the lecture he presented himself to the class, and having drunk a small quantity of the solution of the extract of liquorice with four tumblers of water, he introduced the tube into his stomach. Mr. Scott applied one of the stop-cocks of the syringe to the tube, and immediately pumped out the whole of the liquid taken into the stomach. Thus the experiment completely succeeded, to the great satisfaction of Sir Astley and the gentlemen present. On this subject we refer our readers to the interesting letter of Mr. Alcock.

On the immediate Treatment of Persons poisoned. By Mr. ALCOCK.

[*To the Editor of* THE LANCET.]

SIR,—I take the liberty of offering a few remarks, by which your readers may trace the progress of the invention of the apparatus for the removal of poison from the stomachs of living animals, conceiving that your statement of an experiment performed in the theatre of Guy's Hospital, on the 21st of last month, and of the comments made by the able and learned professor, whose approbation is so warmly expressed, must be inaccurate or erroneous. I assume that your statement must be erroneous, as it is calculated to convey the idea that the mechanical removal of poisons from the stomach was altogether new, and solely established by that experiment. I am, therefore, induced to offer these remarks, in justice to my professional brethren, and to obviate the stigma which must attach to them, if they could be supposed ignorant of the mode of treatment above alluded to, many years after its practicability had been demonstrated and published to the world.

The experiment at Guy's consisted in removing the contents from the stomach of a dog, by a syringe or pump, with an affixed tube, long enough to reach the stomach.

The subject is of great importance, and cannot be reverted to without regret; as, in consequence of the frequency of poisoning, by mistake or otherwise, the lives of many valuable members of society have unfortunately been lost, which might, in all human probability, have been saved by efficient medical or surgical treatment. Even the number of deaths by oxalic acid alone, related in the public prints, would form a melancholy illustration of this fact.

The usefulness of immediately removing poison from the stomach of an individual who has been luckless enough to swallow any hurtful quantity, is too obvious to the common sense of mankind to require much comment. The present is not a fit opportunity for entering upon the minutiæ of actual practice; but, I trust, on another occasion, it will admit of proof, that the means of effecting this removal are suffi-

ciently simple to allow of being used by any one of plain common sense, and of moderate mechanical dexterity, who possesses the slight anatomical knowledge requisite for passing a flexible tube down the gullet, and to whom the necessary precautions have been clearly pointed out.

These means consist essentially in *sucking* or *pumping out* the fluid and pulpy contents of the stomach, however varied the form of the exhauster or pump may be; whether it be a mere elastic bottle, a common syringe, or a pump, in the usual acceptation of the word, furnished with valves, to prevent the retrograde motion of the fluid. Neither does it signify whether these valves be spherical, conical, or any other shape, so that they be accurately fitted. Each of these instruments acts on the same principle; namely, that of taking off or diminishing the pressure of the atmosphere from some part of a fluid, whilst its weight (that of the atmosphere) acts upon the general surface, and forces the fluid in the direction in which the pressure is taken off.

Every invention of a certain degree of importance has had many, and sometimes rival claimants. The principle of *suum cuique* is venerated by every lover of truth, and ought to guide every inquirer.

I deem it unnecessary to repeat your description of the instrument, and the detail of the experiment, contained in The Lancet, page 209.—The approbation which you there state generally, one of your contemporaries has given in particular; and as it tends more strongly to convey the erroneous idea alluded to in the beginning of these remarks, I subjoin the passage:—

"Sir Astley shook hands with Mr. Reed, and complimented him on his ingenuity; observing, that had he lived in Greece, during the time of its splendour, instead of in England, he would have been undoubtedly crowned with laurels. It might be made applicable (observed Sir Astley) to more purposes than one; it might be appended to the catheter, it might be used in the rectum. Addressing himself to the students, Sir Astley alluded to the success of the machine, by observing that there was evidently to be found in the use of it a plausible and a very practicable method of dislodging the contents of the stomach; which, he conceived, it would be advisable to do by this means, where poison had been swallowed, previous to giving any medicine as an antidote. Thus far, alone, it was of most valuable importance to the profession, as well as to humanity at large."

Would any one, perusing the above, suppose that the experiment to which it alludes was not quite *unique?* There does not appear any allusion to the same having been performed by others. Next week, the subject being resumed, allusion is made

to Mr. Jukes and Mr. Bush, who, in 1822, published on this subject.

The following quotations are from *The Lancet*:—

"Let me ask you then, Gentlemen, whether an experiment of this kind is not in the highest degree interesting, and whether we are not infinitely indebted to the man who first suggested the means of administering relief under such afflicting circumstances? I am happy to tell you, that the gentleman to whom we are indebted for this suggestion is now present; that he is ready to have the experiment made upon himself; and that so confident is he of the success with which it may be applied, that he would have no objection, if I could permit it, to take a large quantity of the tincture of opium in your presence this evening.

"The syringe which was brought to me the other day by a very ingenious man, Mr. Reed of Kent, is entirely a new invention.

"Mr. Reed's syringe is a new contrivance, which has been formed upon a principle in hydraulics (first applied, I believe, by Mr. Bramah), and which is capable of increasing the force of the instrument to the greatest possible degree. To give you an idea of its force:—If I were to stand on a piece of wood, and the wood were surrounded by any thing which would prevent the escape of water, the force of the syringe is capable of raising me from the ground. I do not wish to commit myself by any observations on a subject with which I do not pretend to be particularly conversant; but I believe, Gentlemen, the principle is this: *When a fluid contained in a vessel having a large diameter, is thrown into one of very small diameter, the result is an exceedingly great accumulation of force.*"

Now, Sir, some parts of the statements in the preceding quotations are so obviously erroneous, that I cannot believe such an enunciation as that marked above *in italics* could ever proceed from one of the most celebrated surgeons and professors of the British metropolis, in tne form of instruction to a highly respectable and intelligent class of students.

The communications of Mr. Bush and of Mr. Jukes were kept up for several months in the London Medical and Physical Journal, and the Medical Repository, and a charge or insinuation of piracy refuted; whilst, by the retort courteous, another charge of a want of reflection, and consequently dangerous practice, was clearly made out. The merit of each of these gentlemen might have stood sufficiently high, had not the able and intelligent Editor of the Medico-Chirurgical Quarterly Review shown that whatever foundation these supposed *inventions* might have in usefulness, they could have no claim to *novelty*, upon any surgeon who had kept pace with the improvements of the

age in which he lived; the apparatus having been perfected, and the description of it published, years before. The subject was also discussed in the Medical Intelligencer for 1822, and the proposal of changing the more bulky syringe for a small forcing pump, distinctly made: "If a two-ounce syringe be used as a forcing pump, it may be made to perform all that their larger instruments can accomplish, and more speedily too."

Be it observed, that the means actually and successfully used by Mr. Jukes were the mere elastic bottle and flexible tube, and may be considered as the least perfect mechanism that can be used for a pump; yet they were proved to be fully sufficient.

Mr. Bush's proposal of the syringe was certainly an improvement upon the elastic bottle; but, in any other than awkward hands, either may be used expeditiously and effectively.

In 1820, Mr. Evans, of Belper, successfully evacuated the stomach of a female who had swallowed poison, by more simple means than either of the preceding. The case is published in the *Transactions of the Associated Apothecaries and Surgeon Apothecaries* of England and Wales.

Let us, by tracing one step farther back, examine the claims of Mr. Jukes and Mr. Bush to the merits of this *invention*. In December, 1822, the following pithy comment appeared in Dr. Johnson's Medico-Chirurgical Review:—

"NOVELTY.

"Our readers will have perceived that Messrs. Jukes and Bush have *invented* an apparatus for extracting poisons from the stomach. The same apparatus was proposed by Boerhaave, and brought to perfection by Dupuytren and Renault in France. The whole apparatus, exactly as described by Mr. Jukes, may be seen in Orfila's Toxicology, vol. i. sect. 84. So much for the *novelty* of the thing."

The description of the apparatus, and the mode of proceeding to empty the stomach mechanically, contained in Orfila's valuable work on poisons, is so clear and perspicuous as not to require further simplification. Neither does the apparatus, as far as usefulness is concerned, admit of any improvement, since its operation is expeditious and certain. Orfila's work was published in France in the year 1814; the Dissertation of M. Renault, from which Orfila quotes the description of the instrument, and the experiments on living animals, were defended in the School of Medicine, in the year 10 of the Republic (1803). Orfila's work has been translated into English.

Let us recapitulate the facts and dates:—

Boerhaave proposed the use of the flexible tube passed into the stomach; that which Du-

puytren and Renault perfected. — Boerhaave lived from 1668 to 1738.

Renault's Dissertation, containing the description of the perfected instrument, in the year 10—1803.

1814.—Orfila's republication of Renault's description and experiments.

1818.—Orfila's work was translated into English, and published.

Mr. Evans's case having been but lately published (two or three months ago), may be passed over.

1822.—Mr. Jukes's observations and experiments published in the Gazette of Health; and, subsequently, in the Medical Repository, and London Medical and Physical Journal.

1822.—Mr. Bush's communication published in the Medical and Physical Journal.

1822.—The substance of Mr. Bush's and Mr. Jukes's papers was stated in the Medical Intelligencer.

1822, Dec.—The subject was pointedly noticed in the Medico-Chirurgical Quarterly Review.

1823, Nov.—Mr. Reed's *invention*, with comments.

I will translate from Orfila's work* the description of the instrument used by MM. Dupuytren and Renault†, p. 103, not having the English edition at hand to refer to.

"The gum-elastic tube," says M. Renault, "should be of a sufficient length to allow one of its extremities to reach the most depending part of the stomach, and of a calibre large enough to give passage to soft substances, such as those in a half-digested state; it should have two orifices, one at each extremity; lastly, a ferule of metal should embrace the external orifice, which is to be received into the canula of a syringe. Things being thus arranged, the tube is introduced into the stomach by the mouth or nostrils; the syringe adapted to it, and a certain quantity of liquid is gently injected to dilute, hold in suspension, or dissolve the poison. Then the piston is raised, a vacuum formed, and some of the contents of the stomach drawn in. After these two operations have been repeated several times, the viscus (stomach) is well washed, and all the poison is extracted, without any violence, and almost without any pain, and in a very short time. Whenever the poison shall not have passed the pylorus, and it is not in very large fragments, the possibility of extracting it by this process is evident to all who are in any degree acquainted with natural philosophy."

M. Renault goes on then to say, "*I have injected as much as eight ounces of water into the stomach of several small dogs, and I have always succeeded in pumping the whole of*

* Traité des Poisons, par M. P. Orfila.

† Nouvelles expériences sur les contrepoisons de l'arsenic; dissertation soutenue à l'école de Medecine.

it out by the process which I have just described." M. Renault further adds, "that the experiment could not fail to succeed, when it is recollected with what success analogous means have been had recourse to for the purpose of emptying the bladder when filled with coagulated blood."

Contrast the above with your statement given in THE LANCET, p. 223:—

"The other subject, to which I mean to call your attention, is the experiment which I made on an animal last Friday, in the other hospital. This experiment, Gentlemen, delighted me; I do not know that I have ever experienced greater pleasure in my life than I felt in going home from the hospital on that day. With respect to antidotes against the effects of poison, it is well known that they are, in a great degree, useless. It is impossible, for instance, to get rid of arsenic in the stomach by any remedy that can be administered. It is doubtful whether any man ever recovered from the effects of that poison by means of an antidote. So with respect to opium, when it is taken into the stomach in such large quantities that vomiting cannot be excited, the patient cannot be relieved by the exhibition of medicine; for where is the antidote against the effects of opium? A few weeks ago, a nurse in this hospital died in consequence of having swallowed opium. No relief was administered to her; but can it be said, after what we saw on Friday, that no relief *could* have been administered to her? A short time since, a patient died in the other hospital under similar circumstances; the quantity of opium taken being so large that vomiting could not be excited by any means which were employed."

I consider comment on these facts unnecessary, and leave the profession to judge how far we are indebted to Messrs. Reed, Jukes, Bush, &c., for this improvement in the treatment of persons who have taken poison; or to our continental brethren, whose views on this subject have for so long a period been made known to the world.

I am, Sir, yours, &c.,

THO. ALCOCK

11, *New Burlington-street*
Dec. 9, 1823.

GUY'S HOSPITAL.

Dec. 1.—James B. from Rootham in Essex, was brought into the theatre, at half past twelve, to undergo the operation of lithotomy; but after being on the table for three-quarters of an hour, and five or six unsuccessful attempts to introduce the gorget into the bladder having been made, he was carried back to the ward without receiving much assistance from chirurgical skill, as no stone was extracted.

This patient was operated on for stone at St. Bartholomew's Hospital four years ago,

but a full hour elapsed before the stone was removed. The operator, on that occasion, was Mr. Vincent, and on the present, Mr. Lucas.

The day after the operation he was bled, as his pulse at that time indicated considerable action and power in the vascular system. On the Wednesday, however, the violence of the pulse had very much abated, and from that time it gradually manifested less power, day after day, until he died.

During the eight days that he survived the operation, he complained of great pain in the bladder, but there was no tenderness of the abdomen. On the third day, there was a discharge of matter from the wound in the perineum, which continued to increase up to the period of his death.

We have already stated that Mr. Lucas was unsuccessful in his attempts to extract the stone from the bladder, although he most assiduously persevered in his exertions for upwards of fifty minutes; during which time, both the gorget and forceps were freely introduced! All, however, was unavailing, and the man unfortunately was obliged to leave the theatre in a worse condition than he entered it. It now became matter of conjecture, whether there existed a calculus in the bladder; it was pretty evident this would not be a subject of speculation for many days, as, from the diseased state in which the bladder was found, his speedy dissolution was confidently anticipated. We have before mentioned that he died on Tuesday morning, and as the relatives wished to remove the body into the country the same afternoon, the dresser very judiciously and very carefully removed from the corpse —the bladder, rectum, pubes, together with that portion of perineum into which the incision had been made. On the following day, Mr. Key examined these parts in the presence of several of the students. In the bladder was found a considerable quantity of pus, the coats thickened, and exceedingly vascular; the prostate gland very much diseased, and increased to the size of a large orange; of a a pyramidal form, the base being to the pubes, and the point projecting into the bladder, somewhat in the manner of an unimpregnated uterus into the vagina; behind this enormous prostate was situated a small stone, about an inch and a quarter in length, and three-quarters of an inch in breadth.

The opening which had been made by the gorget into the bladder, was at the upper part of this diseased gland; and notwithstanding the repetitions of its introduction, had made an incision of only *three-quarters of an inch in length.*

Dec. 12th.—A man was brought into the operating theatre at a quarter before two, with a large swelling on

the inside of the thigh, extending the whole of its length. The integuments were not discoloured, nor did the patient complain of much pain in the part. The case being of a doubtful nature, it was determined to introduce a lancet into the tumour at the most depending portion; this being done, some fluid, of rather a thick consistence and brownish colour, was evacuated, in which were found several hydatids. After the fluid had been let out, a linen roller was applied tightly round the thigh (the opening being left uncovered), in order to procure adhesion of the sides of the sac. The quantity of fluid evacuated amounted to about two quarts; it was situated beneath the fascia lata of the thigh.

Conduct of the Surgical Class at the Borough, previous to Sir ASTLEY COOPER'S *Entrance.*

To the Editor of THE LANCET.

Dulce est desipere.

SIR,—Your facetious Correspondent, who recommended pushpin, and a variety of other games, to the adult members of the profession, in the last week's LANCET, would, perhaps, deem his advice unnecessary, if he were to witness the scenes which take place in the Theatre of St. Thomas's Hospital, during the half hour previous to the entrance of Sir Astley Cooper. Students, already so accomplished in the branches of science pointed out by your Correspondent, can need no additional instruction. What an interesting spectacle, Mr. Editor, to see a body of young men, assembled for the purpose of acquiring professional knowledge, actively engaged in discharging masticated paper and apple into each other's faces, or employed in the no less intellectual occupation of twirling round the Lecturer's table, or sprinkling dirt on the heads of those who happen to sit under them! I have been educated at Edinburgh, and have attended the medical schools of our continental neighbours; and I can assure you that the students of St. Thomas's are not only far greater proficients in these accomplishments than their graver brethren of the North, but that if a student from the *Ecole de Médecine* were introduced into the theatre in the Borough, he would be compelled to acknowledge the inferior vivacity of a class of French students. Such an admission would no doubt be very humiliating, but the students in the Borough are entitled to it; *palmam qui meruerunt ferant.*

Yours, truly,

EDINENSIS.

Remarks on the Extirpation of the Scirrhous Parotid, by DR. WEINHOLD, *Professor to the University of Halle.*

MR. ALLAN BURNS, professor of Anatomy and Surgery at

Glasgow, gave it as his opinion that the extirpation of the parotid could not for a moment be thought of; that the operation is rendered impracticable by the anatomical relations of the gland, which is firmly inclosed between the inferior maxillary bone and the mastoid process; that it had not even succeeded with him on the dead body; and that he could prove, by anatomy, that in no situation, nor under any circumstance whatever, could any one dare attempt it.

But I have already extirpated this gland three times myself in the scirrhous state: the first time on a man called Uhlemon, manufacturer of trusses; the second on the daughter of Mr. Flachman, a clergyman; and the third time on a female, Charlotte Horn, of Piesdorf, near Asleben. In these three cases, without the operation, a painful death would have been the inevitable result; for scirrhus of the parotid, according to the eternal laws of nature, runs through its different stages with as great regularity as a planet performs its various movements; and it is a great error to believe that it will stop: the disease passes in succession through the states of induration, true scirrhus, and ulcerated cancer. During the first it is perfectly possible to extirpate the gland with the knife; in the second the ligature and caustic applications must be resorted to; in the third state it is as incurable, as cancer of any other part.—Science will never make any progress, if people submit themselves to be led into error by everything that is said and written in the world. The operation has been performed; the extirpated gland is preserved in spirits of wine; every man in the profession may see and examine it at my house. I was assisted by several in the operation. Doctor Dolhoff, formerly one of my most industrious pupils, and now established at Magdeburgh, states, in his German translation of Mr. Burns's work, that he was present at the two first clinical operations I performed.

What, then, was the English professor afraid of? In truth, the operation, as it was last performed, endangers that great artery, the cutting of which proved so suddenly fatal, that the late Marquis of Londonderry died in the arms of his physician.

But, if we take the precaution of tying the carotid before the operation, we shall not always have to fear a paralysis of the corresponding side of the face; because an operator, otherwise skilful, produced a permanent paralysis by touching too roughly the par vagum. It appears, then, that this operation is in truth extremely dangerous, but not impracticable. When I shall have arrived at a certain age, I shall probably abstain from practising it; for, to succeed in it, the eye and

hand must be equally sure; we must know perfectly the anatomical disposition of the parts, and we must have had great practice, both on the dead and living subject. In the deep parts the finger feels the pulsation before each incision, and the bistoury must be cautiously conducted between it and the artery; care being taken not to cut at once more than two inches of the cellular tissue which joins the gland to the surrounding parts. The bistoury is the only instrument which can be depended upon; any other, not even excepting the handle of the scalpel, which has often been recommended for this purpose, is liable to tear the artery. —*Journal Complementaire, Nov.*

LECTURE XVIII.

WOUNDS OF THE BRAIN.

Wounds of the brain will often happen, without producing any interruption to the operations of either body or mind. But should the wound be accompanied by either compression or concussion, then the particular symptoms which characterize those injuries will be present. If, however, the wound be a simple incision or laceration, it will often prove quite harmless. Indeed, it frequently occurs that considerable portions of the brain are lost, and yet the mental and bodily functions continue unimpaired. Epileptic fits and hemiplegia certainly sometimes follow, as effects of such injuries; but, on the other hand, brain to a great extent has been lost without having been succeeded by disturbance of either the mental or bodily functions; numerous cases of this description are upon record; several have fallen under my own observation. A case similar to the following likewise came under the notice of a surgeon at Brighton. A dresser of the late Mr. Chandler once came to me when I was in the other Hospital, and said, "Look here, Sir," at the same time showing me a portion of brain, with a piece of the pia mater attached to it. I went to see this man, and found the representation of the dresser correct; there was a large transverse opening in the os frontis, through which a considerable quantity of brain had been lost. His mind was not at all affected; neither were the bodily powers in the least disturbed; no bad symptoms of any kind followed the injury; the wound healed most favourably, and he was soon dis-

charged. About a year afterwards, while I was at the house of a lady in the city, whom I was attending, a man walked into the room, and said to me, "How do you do?" Not recollecting him, I looked at him with some sort of surprise, as you may suppose, when he informed me that he was the man whom I had seen about a year before in St. Thomas's Hospital, with a wound in the head, and through which he had lost some of his brain. I replied that I could readily believe him. He stated that he had been quite well ever since,—he had what he called an opening where he received the wound; was not subject to fits; and to show you that his mind (notwithstanding his familiar 'how do you do?') had not sustained any damage from the accident, he was, at the time I saw him, conductor of an extensive business at the house where he was then living.

It occasionally happens, when a portion of brain has been lost, that a piece of the cranium will, by being driven in, occupy its place; and if, in these cases, no symptoms of compression manifest themselves, you must not elevate the depressed bone: for were you to do so, you would, in all probability, give rise to extravasation, or increase the hazard of inflammation. The late Mr. Chandler had a patient in this Hospital, who, on receiving a blow from a boat-hook upon the parietal bone, had a portion of that bone driven into the brain, and at the same time a quantity of the brain was lost: at first there was hemiplegia; this effect, however, soon disappeared. The depressed bone was permitted to remain, and the individual perfectly recovered. Such cases are not uncommon, and I could relate a number of them to you.

The danger attending injuries of the brain arises principally from two causes: viz., inflammation, and the formation of fungus. 1st, Inflammation, and 2d, Fungus; but I am happy to tell you, that both of these may be conquered by scientific and prompt treatment. When the brain receives a wound, you must commence your curative exertions by abstracting as large a quantity of blood from the system as the constitution of your patient will bear; not, however, to such an extent as to prevent the restorative operations of nature. Do not lower the system to such a degree as to prevent inflammation alto-

gether, as was done by the dresser in the other Hospital, whose partiality for bleeding I mentioned to you a few evenings since. Though you succeed in keeping down inflammation, fungus will spring up; and here (exhibiting a preparation) you have an opportunity of seeing an example of the disease to which I allude. Sometimes wounds of the brain extend even to the ventricles, and here (showing another preparation), you observe that one of the lateral ventricles was laid open.

Now, Gentlemen, some days after the brain has been wounded, the divided parts begin to unite by means of the adhesive inflammation; if this process cannot effect a cure, granulations form, which at length project through the opening in the skull, and give rise to the fungus before mentioned. Upon proper treatment the safety of your patient depends. If you do not repress the growth of the fungus, there will be violent constitutional irritation, and the life of the person in jeopardy; but, on the contrary, if you attend to the condition of the wound, and prevent the fungus from rising, there will be, comparatively speaking, but little dan—

Well, Gentlemen, the treatment is as follows:—You are to apply to the fungus a piece of lint, wetted with liquor calcis, and over this, strapping of adhesive plaster; when you examine the part on the following day, you will find the fungus considerably diminished; you are then to use a thicker piece of lint, and the strapping as before; pursuing this plan, you at length get the fungus to the level of the scalp; but this is not sufficiently low for your purpose, therefore you must still thicken the lint until you have succeeded in getting it even with the edges of the dura mater, in which position it must be cautiously preserved; when, at last, the dura mater heals over it, and your object is accomplished. We witness many examples of such cases in these Hospitals. Formerly it was the practice in the treatment of these diseases to remove the bone contiguous to the fungus: immense quantities of bone in this manner were taken away, thereby affording every facility to the growth of the fungus, and which, of course, rapidly increased, until the patient was destroyed. By such treatment as this, no person could possibly recover; the method was a most injurious

and stupid one: therefore let me caution you against adopting it. The plan of treatment which I have just recommended to you is unquestionably the best: viz., that of repressing the growth of the fungus until the dura mater heals over it.

INFLAMMATION.

I shall now speak more particularly of the inflammation which follows wounds of the brain. wherein their chief danger consists; which danger is much increased, if the dura mater be the part attacked. Upon the first approach of inflammation, the person complains of great pain in the head; very quickly falls into a comatose state; and when roused from this condition, the pain is excessive; the scalp, round the external wound, becomes œdematous, for if you press upon it, the impression of the finger is retained; the edges of the wound have a shining glossy appearance, and from the wound itself is discharged a fluid, composed of blood and serum; sometimes the parts about the wound have a sloughy appearance; the countenance is very much flushed, and the carotid arteries beat with very great force; so much so, that if his shirt collar be open, you can see the pulsation of the carotids, at some distance from the bed; this circumstance, of itself, would be quite sufficient to convince you that there was a great determination of blood to the brain. The next thing which you observe is, that the patient is seized with rigors, and these follow in very quick succession; hemiplegia likewise often attends, and is generally situated on that side of the body opposite to the wound; the patient remains in a comatose state, but, when roused, will give you (until towards the very last) rational answers to such questions as may be put to him. These, then, are the ordinary symptoms of inflammation of the brain, arising from wounds of that organ.

If the inflammation should terminate in suppuration, I have already shown you in a former Lecture where the matter would be situated, viz., between the dura mater and skull (this rarely happens), pia mater and tunica arachnoides, pia mater and surface of the brain, and, lastly, in the substance of the brain itself. When pus is situated between the dura mater and skull, trephining for its removal would be attended with complete success; but the

chances of finding it there are against you, as it is generally situated between the pia mater and surface of the brain, for which an operation would prove worse than useless. Another situation in the head where matter has been found is, in the longitudinal sinus of the dura mater. This woman, (holding up a preparation), seventeen months before she died, fell down stairs, and her head went in violent contact against a chest, by which she became stunned; for some time after the fall, matter was discharged from one of her ears; this at length ceased, and, to all appearance, she was entirely well. The pain, however, again returned with evident symptoms of compression; and sixteen months after the accident she was admitted into this Hospital. After some remedies had been fruitlessly tried, and she had been here for a short time, it was thought advisable to apply the trephine; the operation was unsuccessful, and four days afterwards she died. Upon examination it was found that there was a small quantity of pus embedded in the longitudinal sinus, as you here see it (exhibiting the preparation). This is the only example of the kind which I have witnessed.

The next part in which matter is situated is between the tunica arachnoides and pia mater, or between the pia mater and brain itself. This last is of most common occurrence, and in this case the matter is diffused over the hemispheres of the brain, in the same manner, as I mentioned to you the other evening, that blood is when extravasated on that organ. When the matter is between the pia mater and brain, it will be of no use to operate, as very little will be discharged, there being no communication between one part and another; for the matter is contained within distinct cells, between the vessels which come from the pia mater to the brain. The next situation in which matter is found is in the substance of the brain itself. Here are specimens (pointing to some on the table), in one of which matter was lodged in the anterior lobe of the cerebrum, the other in the cerebellum; in fact, it is lodged in various parts, and the only circumstance very curious in this complaint is, that you would not suppose, from the symptoms, that matter was forming; they are those of compression rather than irritation. If the membranes of the brain be attacked

with violent inflammation, symptoms of irritation will be present; but if the brain itself, they will be those of compression; and the circumstance which surprises a person who examines the brain of an individual in which matter has been formed is, that so little constitutional irritation existed during its formation: it is in inflammation of the membranes, and not of the brain itself, in which great irritation is present. Here is a curious specimen, (pointing to one before him), taken from a child that I had under my care, and on whom I performed the operation of trephining; I will give you the history of the case: A young child was playing in a yard where there were some fowls, when it received a wound on the head from the beak of a cock. The mother hearing the child shriek, ran to the spot, and found that there was a small wound of the scalp, and thinking that there was no injury to the brain, she bound it up: but a week afterwards pain in the head came on, together with great constitutional irritation, and the child was brought to me. On examining the head, I found that a circular incision had been made in the bone, and that matter issued through the opening. I said to the mother, If the child is not better by to-morrow, bring it to me again, and I will allow a more free opening for the matter to discharge itself. The next day the child was brought to my house, and I performed the operation of trephining, when I found there was an opening in the dura mater and pia mater, corresponding to that of the bone; the symptoms of irritation were relieved by the operation, those of compression however came on, and in three days from the time in which it was performed, the child died. On examining the part after death, I found that there was a circular incision in the dura mater, the edges of which were hardened and thickened, as you see here, (pointing to the very part,) a similar state of the pia mater and brain, in size corresponding to the external opening, and an abscess between the pia mater and brain. At that time I had no idea that a wound of the description I have just mentioned could be produced by a bird of this size; but, since that period, I have seen an instance of a similar kind: a pheasant, not an English, but an Indian one, made a dart towards the eye of a person, and, instead

of striking it, wounded the os malæ: the bird, by means of its beak, struck a hole into the superior maxillary bone, just below the zygomatic arch.

The time at which inflammation of the brain supervenes after the injury received, is generally about a week; rarely under that time; and this it was that led me to say, on another occasion, that inflammation of the brain was more slow in its occurrence than that of any other organ, in order to put you on your guard. It often happens that inflammation of the brain does not come on till a fortnight, or even three weeks, after the injury: therefore every surgeon who has written on the subject puts you on your guard as to the distance of time this complaint comes on after the accident: he tells you that the patient is not safe till two or three weeks afterwards. If you read the works of Mr. Pott on the injuries of the head, you will find the circumstance mentioned; and in the work of Mr. Dease, of Dublin, (who has published an excellent treatise on the subject) it is distinctly stated, that inflammation of the brain is occasionally postponed to three or four weeks after the accident occurs, and even then, the patient is not always safe. I will give you a case relating to this subject: Dr. Babington and myself were sent for to see a person, a clerk to the firm of Whitbread and Co., who, whilst riding on horseback, struck his head against the branch of a tree; he being a short-sighted man, and riding fast (here the learned Professor was interrupted for a moment by the fainting of one of the students), struck himself violently against the bough of a tree which was overhanging the road, and was brought to the ground by the force of the blow. He was taken to Croydon, where Dr. B. and myself visited him. We found that he had been struck on the os frontis, just above the frontal sinuses, where there was a depression; and this was the first case in which I witnessed emphysema of the forehead produced by blowing the nose. We took all possible care of the case, bled him, regulated his diet, &c., till the inflammation had subsided. He came to town three weeks after the accident, when he asked whether he might go to Rochester, to spend a little time with some friends, who were anxious for him to come. We told him that he might, if he would pay attention to him-

self, keep his bowels open, and regulate his diet. After the lapse of a week he became extremely ill, inflammation of the brain came on, and he died. On inquiry, we found that he had neglected the directions given him, and allowed his bowels to get costive. It is always a very serious case when there is a depression on the forehead after an accident, and I will mention to you an instance of this kind, which will show you the necessity of enjoining on a patient with this injury strict attention to his mode of living. A man who had received a wound in the forehead from a pistol-shot came to this hospital: the wound healed kindly, but the depression remained. Whenever this man indulged in the use of spirituous liquors, he used to come back with violent pain in the head, which was always relieved by bloodletting.

As to the treatment of inflammation of the brain, it is the same as for inflammation generally, with this exception only, that blood should be drawn from the temporal artery in adults, and the jugular vein in children. Whenever inflammation of the brain attacks a grown person, take blood from the temporal artery; and when young individuals, from the jugular vein; by these means you abstract blood more readily from the part. Even in adults you may, after opening the temporal artery, if the symptoms be not relieved, bleed from the jugular vein. In addition to this treatment, you purge, produce perspiration, and apply blisters to the head. I have seen poultices, containing some stimulating application, of considerable use. It will now and then happen that trephining will be required; and I will tell you the cases in which it will.

1. Where there is extravasation of blood between the dura mater and skull.

2. In simple fractures, with depression and symptoms of compression continuing after depletion.

3. In compound fractures, with depression, unaccompanied with symptoms of compression.

4. It is required sometimes that an opening should be made in the cranium, when there is matter between the dura mater and skull.

Now it generally happens in these last cases, where there is matter between the dura mater and skull, that there is fracture, and this is an indica-

tion that some injury has been done to the brain, when it is also followed by rigors and other symptoms: still it will be right, in some cases where there is no fracture, and the other symptoms, rigors, &c., are present, to penetrate the bone, to see whether matter is lodged between it and the dura mater; and this is the only case in which it is proper.

The *Operation of Trephining* used to be one of the most complicated kind, requiring several instruments, the learning of which was in itself quite a study: it is now quite simple, and few instruments only are wanted, which can very easily be put into a small case. Let us go over the instruments formerly used in this operation; but really, Gentlemen, they were so numerous, I don't know whether I can count them (*a laugh.*) They used then a scalpel, rougee, pin, perforator, crown, brush, elevator, lenticular, and a pair of forceps: now you may see, (holding a case in his hand) these three instruments will be quite sufficient, a knife, with a double edge, in order to scrape off the pericranium, an elevator, and a trephine having a crown, and a pin which will allow of being easily moved. Now, Gentlemen, I will tell you in what parts the trephine should not be applied. First, you should never trephine in the line that extends from just above the nose along the top of the head to the tuberosity of the occiput; over the frontal sinuses it is obviously improper; and at the summit of the head you will meet the sagittal suture, where the dura mater adheres with extraordinary firmness, and the longitudinal sinus might also be wounded; and at the posterior part you have the superior portion of the perpendicular spine of the os occipitis; therefore, in this line you ought not to trephine. I should mention this particularly to young persons, who very often disregard this rule, thinking they know much better than those who have preceded them: if, however, they trephine in this part, the more fools they, and I will tell you why: they are running, in operating in this part, an unnecessary risk, by cutting on a long hole covered over by a smooth membrane, when they might do it as well on either side. It would be the folly of presumption to trephine on this line. There are two other parts in which the operation of trephining should not be performed: first, over the anterior inferior angle of the

parietal bone, just above the zygoma; secondly, behind the ears, on the posterior inferior angle of the same bone; and why, no doubt, most of you by this time know: opposite to the anterior inferior angle of the parietal bone is the great artery of the dura mater, and opposite to the posterior inferior angle is the great lateral sinus. Fractured portions of these bones may be raised by the elevator; and I may observe here, that this is the instrument chiefly used in cases where the fractures are running in the direction of these parts. Mr. Hey's saw is a very useful invention. It is gratifying to state that we are seldom now called on to perform this operation. Suppose, however, you were called to a case requiring it, where there was a wound, together with depression of the parietal bone, you would put your finger into the wound, and if the portion of bone depressed were small, you would make a simple incision, and turn the integuments aside, so as to reach the bone. If by this incision you found depression with fracture, you enlarge it in the course of the fracture; if the depression were large, you would make a crucial incision, and turn aside the portion of integument, so as to open a space for the application of the trephine: then, with the back edge of the knife (which should be made a little stronger than usual), you cut through the pericranium, and scrape it off. For this purpose the rougee was formerly employed. [There was a subject on the table, on which Sir Astley performed the operation as he went on describing it.] Now I put the pin on the skull, and the crown being adjusted, I fix it, and begin the circle. Well, Gentlemen, having made a circle, I remove the pin: in young persons it will be necessary to do this soon, because the bone is readily sawn through. I never myself saw a case in which the pin entered the brain; but my nephew was present when the operation of trephining was performed, and the *pin was forgotten*, so that it entered the brain, and inflammation of the dura mater came on. I can conceive that a man in his first operation, anxious how he shall succeed, might forget it. When using the saw, let your bearing on it be as even as possible, else you will be through one part of the skull before another. There is but one danger in performing the operation of tre-

phining, and that is, wounding the dura mater. When trephining on living subjects, you are informed of the progress you are making by blood issuing from the wound when you reach the diploe; and when you see the blood, you will know that you are half through: but, recollect, in very young and old persons there is no diploe; therefore, very few turns of the saw will do. As you proceed with the sawing, you must introduce your probe, to see how nearly you are through: you sound as you go on. When I find that I have sawn through in one part, I introduce the elevator, and lift the portion of bone, the parts not cut through being easily broken. I find by my probe that in the part near the sagittal suture I have sawn through; I introduce the elevator, feel the bone move, and know that a very few turns will do, taking care not to lean on the side through which I have already sawn. The bone can be raised and loosened; I am quite certain that the dura mater is not injured, and by introducing the elevator, the bone may be removed from its place. [Here the operation was completed.] Some people say that this is a trifling operation, not difficult to perform, nor dangerous; but they deceive you: it is one of the most dangerous operations in surgery;—whilst performing it there is but a single step, a small net-work between your patient and eternity; saw through this, and destruction of life will generally be the consequence. Mr. Hunter made an assertion, viz., that when the dura mater was wounded, the person never recovered; which, though not exactly borne out by the cases which have occurred since, shows the impression made on the mind of a man who was such an observer of nature. Before his death, Mr. Hunter saw a case of a wound of the dura mater recover. It is certain that there is less danger when the dura mater and pia mater are both injured: the danger is more when the dura mater is injured without the pia mater. I will tell you the reason: in the former case, where both the dura mater and pia mater are wounded, a fungus immediately projects, and fills up the cavity. If, however, there is only a small opening in the dura mater, and I were to put some quicksilver into it, where would it go?—into the lower part of the spine between the tunica arachnoides and dura

matral covering; inflammation of the dura mater would spread over the whole cavity of the canal, as erysipelas does over the surface of the body; whereas, in the first kind of injury, fungus will project through the opening, which would easily close by the process of adhesion that would take place. I have seen many instances where the dura mater and pia mater have been wounded, but few where the dura mater only has been.

After trephining, the elevator should be introduced to raise the depressed bone, and in this way return it to its natural situation. You see that there is no necessity to operate where there is any risk, because an operation in a part where there is no risk can be as well performed, the object being only to raise the bone.

LECTURE XIX.

OF WOUNDS OF THE SCALP.

On this subject I have but few observations to make. Wounds of the scalp are not devoid of danger, and I have known several instances in which apparently slight wounds of that part have destroyed life. They are more especially dangerous if accompanied with contusion. If a person receive a blow from an instrument capable of lacerating the part, and considerable inflammation follows, the wound will sometimes destroy life. There are two ways in which wounds on the scalp occasionally prove destructive of life; first, by producing erysipelas, and secondly, by producing inflammation of the tendon of the occipito-frontalis.

A man came to the other Hospital a short time ago with a wound of the head from a blow which a companion had given him. The dresser thought it too slight a case for admission into the Hospital; but a few days after, the man returned with violent pain in the head, a considerable swelling of the scalp, and erysipelatous inflammation extending over the whole face and neck. He was admitted into the Hospital for the erysipelatous inflammation, of which he afterwards died. Upon examining the body, there was found an effusion on the membranes of the brain between the tunica arachnoides and the pia mater. The other way in which wounds of the scalp destroy life is by producing inflammation of the tendon of the occipito frontalis, which extends over the whole surface of the head. This inflammation extends over the

scalp and face, and assumes an erysipelatous character, but it is not true erysipelas. It has not the vesicles or blisters filled with serum, which commonly attend erysipelas, but it has a tendency rather to suppuration; and if the constitution has strength to produce this suppuration, it takes place between the tendon and the pericranium. In this way a very extensive abscess is often formed, into which we are obliged to make an incision, in order to discharge the matter, which cannot make its way through the tendon. Extensive disease is thus produced, and the inflammation attending it sometimes destroys life. I have already alluded to a case that occurred recently, in which a person died of erysipelas, which followed the removal of an encysted tumour. The tumour had been removed twice before, and to prevent its recurrence, an incision was made so deep as to lay bare the pericranium, and in this operation the tendon had been cut through. There is a great deal of danger in inflammation arising from this cause, and it is on that account that I was anxious to point out to you, in a former Lecture, the impropriety of making incisions in the scalp, merely for the sake of exploring the nature of the injury. An incision in the scalp is often attended with considerable hazard, and should never be made unless imperious necessity demands it.

Of Injuries of the Spine.—Injuries of the spine produce effects similar to those arising from injuries of the head; the spine being liable to concussion, extravasation, and fracture with depression.

Cases of concussion of the spine are not very unfrequent. They occur more commonly in the lumbar region than in other parts of the spinal column. A violent blow on the loins produces paralysis of the lower extremities. The paralysis, however, is not complete; the person is unable to support his body, but generally some power of moving his limbs remains. This paralytic state, arising from a blow on the loins, is in general easily removed in the following manner. You apply cupping-glasses to the part, and take away blood from it several times with the scarificator. If, at the end of a week or ten days, the paralytic state still continues, you must apply a blister to the loins, and keep it dressed with equal parts of the unguentum lyttæ, and unguentum sabinæ.—The lytta being in this way absorbed into

the constitution, diminishes the disposition to paralysis, while the counter-irritation also produces good effects. Such is the plan of treatment to be pursued in cases of concussion of the spine. With respect to extravasation on the spine, the examples are but few in which this has occurred. The cases which are more particularly impressed upon my mind are, first, one which was examined in this Hospital by Mr. Henry Cline. A person received a severe blow near the cauda equina, by the last dorsal vertebra. He had paralysis of the lower extremities, and shortly after died.

The second case was one under Mr. Heaviside, in which I and Dr. Baillie were also consulted. A young gentleman was swinging with a party of boys, when one of his companions pushed him, that he might rise as high as possible, while two others ran in the opposite direction, and caught him in the neck with a rope, as he descended. He was thrown out of the swing, and when he was taken up, was found to be paralytic in the lower extremities. He soon became paralytic in his upper extremities also, and a few weeks afterwards he was brought to town in this state. It was suspected that there was some disease of the spine, produced by the injury the neck received, when the rope suddenly caught it, but no deformity could be discovered. An issue in the neck was advised, with a view of producing counter-irritation; but before this plan could be carried into effect, the boy died. On examining the body, it was found that one of the vertebral arteries had burst, and that extensive extravasation had taken place from the foramen magnum to the sixth cervical vertebra. The whole sheath of the spinal marrow was covered with blood. Mr. Heaviside has a beautiful preparation made from this subject. These cases probably admit of no remedy where the extravasation is considerable. I do not know what can be done, except to bleed in the first instance, in order to prevent further extravasation; and afterwards to promote absorption, and excite counter-irritation by the application of blisters. I mention these cases to you as worth knowing, that you may make your own observations on them when they occur, rather than as cases about the treatment of which much is understood in the present state of our knowledge. They are of too rare occurrence to enable us to lay

down any positive principles as to the mode in which they are to be treated.

Fractures with displacement of the spine are by no means unfrequent; they have been improperly called dislocations; but dislocations of the spine are extremely rare, and only occur in the cervical vertebræ. What are called dislocations are, in fact, fractures with displacement. It is not that one vertebra is separated from another, for this very rarely happens, and only in the cervical; but that the vertebra is broken through. When fracture with displacement of the spine occurs, paralysis takes place in the parts of the body situated below the injury. If it occur in the loins, paralysis of the lower extremities follows; the power of retaining the fæces, and of expelling the urine, is lost. When the injury occurs in the dorsal vertebræ, there is paralysis of the lower extremities; the same loss of power in retaining the fæces and expelling the urine, with this addition, that it is accompanied with considerable inflation of the abdomen. This inflation might lead the surgeon at first to suppose that there was some rupture of the intestines; but after a few hours, when the patient has had free evacuations, this inflated state of the intestines disappears. The inflation is produced by the great secretion of air into the intestines, in consequence of the diminished powers of the part.

When the injury occurs in the lower part of the cervical vertebræ, paralysis takes place in the upper as well as the lower extremities, though not in the same degree. There is a numbness of the upper extremities, but seldom such a degree of paralysis as to deprive the patient of all power, when the injury occurs below the fourth cervical. The time in which the person dies from these injuries varies according to the seat of the accident. If it occur in the loins, the patient will generally die in from five to six weeks; if the displacement be very considerable, he may die in three weeks; on the other hand, when the displacement is slight, the patient may live many weeks and even months. I have known a person live two years after an injury which was supposed to be a case of fracture, with displacement of the lumbar vertebræ. As there was no examination of the body after death, in the case to which I allude, some doubt must necessarily exist as to the exact nature of the injury; for morbid anatomy can alone teach

you the real nature of disease. When fracture with displacement occurs in the dorsal vertebræ, the patient generally lives a much shorter time; though even in this case I have known a person live nine months. A person of the city, named W., riding on Epsom Downs at full speed, came to a road which led to a chalk or gravel pit, and finding that he could not stop his horse, he put spurs to him to endeavour to clear the pit. He succeeded in doing this, but the horse, in consequence of the effort, fell on the opposite side, rolled over him, and broke his dorsal vertebræ. Paralysis of the lower extremities followed, but this gentleman lived four or five months after the injury. When fracture with displacement occurs between the fourth and seventh cervical vertebræ, the patient generally lives from four to five days. I have known a person die as early as forty-eight hours after the injury. If the injury occur between the second and third, or between the third and fourth cervical vertebræ, the person dies on the instant.

Those who have attended in the dissecting room can readily explain how this happens, and would, perhaps, feel themselves insulted if I were to explain it to them. Those who have dissected less will excuse me for saying that instant death ensues in this case, because the injury occurs above the origin of the phrenic nerve, which is the only agent in supporting respiration after pressure on the spinal marrow has occurred. The function of respiration, after pressure on the spinal marrow, is supported by the diaphragm only, and when the fracture with displacement occurs above the origin of the phrenic nerve, the diaphragm loses its power, and instant dissolution is the result.

But it sometimes happens that the cervical vertebræ are broken without displacement. When this occurs, some curious circumstances take place. At the time I lived with Mr. Cline, the following case occurred:—A girl received a severe blow on the neck, after which it was found, that whenever she attempted to look at any thing above her head, she was under the necessity of putting her hands behind it, and gradually elevating it to the object. When she wanted to look at any thing beneath her head, she put her hands under her chin, and lowered her head to the object. If any other child in play ran against her and shook her body, the con-

cussion produced uneasy sensations, and she would run to a table, or any place on which she could rest her head, and support it with her hands under her chin until the agitation produced by the shock had subsided. The child lived twelve months after the accident. On examining the body after death, Mr. Cline found the atlas broken through; there was a transverse fracture of the atlas, but no displacement. When she endeavoured to raise her head, the dentiform process quitted its natural situation, and carried back a portion of the atlas; when her head inclined forward, pressure was produced upon the spinal marrow, as it was likewise when the body was agitated. This is a curious instance of fracture occurring in the cervical vertebræ without displacement. With respect to the treatment of fracture, with displacement of the spine, nothing has hitherto been effectually done in surgery.

Mr. Henry Cline was the first person who attempted to give relief in this accident. Being an excellent anatomist, and a most able surgeon, he saw no reason why cases of this kind should not be treated as cases of fracture with depression of the skull. Accordingly he cut down upon the arch of the spinal marrow, where the compression was greatest, and with a small trephine of his own invention, he sawed through the arch of the spinous process, and took off the pressure on the spinal marrow, by raising the depressed portion of the arch. It is well known, that in cases of fracture where the displacement has been slight, union of the bone has been produced. There would be no difficulty in producing this union, supposing the pressure on the spinal marrow to be removed. There is a preparation in Mr. Brookes's collection, from a case of fracture with depression, where the person lived long enough for the fracture to be united; and in the College of Surgeons, there is a preparation presented by Mr. Harold of Cheshunt, from a case where union of the bone took place after fracture with displacement. There is no danger, therefore, as to the restoration of the arch of the bone, if the pressure on the spinal marrow could be removed; and it was with this view that Mr. Cline sawed through the arch. It is right, however, to mention, that in many of these cases the spinal marrow is itself torn through. In some cases of fracture with

displacement, it is completely torn; in others partially; and in some not at all. In cases where it has not been torn, there would be hope from such an operation; and it is in these cases that the operation has been performed. Mr. Tyrrell has attempted the operation since Mr. Cline, but both cases have terminated unfavourably. Whether future experiments may be attended with better success it is impossible to say. The proposal was plausible; the operation was easily performed; and as to the result, if the spinal marrow were not torn, there seems no reason why a person should not recover after such an operation. We are obliged, however, to speak doubtingly on this subject, since the first experiments have been unsuccessful. If you could save one life in ten, ay, one in a hundred, by such an operation, it is your duty to attempt it, notwithstanding any objections which some foolish persons may have urged against it. Suppose any one now present were in this state himself; suppose him put to bed with a paralysis of his lower extremities, and fully acquainted with the inevitable result if nothing were done; would he not be glad to have any attempt made to save him? Would it not be foolish and unmanly to say, he would rather die than have such an attempt made? The operation is not severe—it cannot add to his danger; and as to the pain, no man who *is* a man, would regard it. In the two cases in which the attempt was made, the operation did not shorten life; on the contrary, there is reason to believe that it prolonged it You will be justified, therefore, in making the attempt. Though I may not live long enough to see the operation frequently performed, I have no doubt that it will be occasionally performed with success. There is no reason why it should not; and he who says that it ought not to be attempted is a blockhead.—(*A laugh.*)

I shall now proceed to describe to you ANEURISM.

Aneurism is a pulsating tumour containing blood, and communicating with the interior of an artery. There is one exception to this definition, namely, where aneurism, as it sometimes happens, takes place in the heart.

Aneurisms are situated either externally or internally; that is, they are either so situated on the limbs as that access may be had to them, and the nature of the disease clearly ascertained, or they are so placed

in cavities of the body, such as the abdomen, chest, and cranium, as to render the nature of the disease very often extremely doubtful. With respect to external aneurisms, the symptoms may be divided into *three* stages. When you have an opportunity of examining aneurism in its early stage, you will find a small tumour pulsating very strongly—much more strongly than in subsequent stages; for it may be taken as a general rule that the force of the pulsation is in the inverse proportion of the size of the aneurism. When an aneurism is first formed, it contains only fluid blood; and if you apply your finger to the artery between the aneurism and the heart, you will readily empty the aneurismal bag by the pressure. In this state there is scarcely any pain, and no other alteration in the limb than some irregularity of circulation producing spasm in the muscles; and when the patient is going to rest, cramps in the legs, and sudden twitchings, which prevent him from sleeping. The next state in which we find aneurism is, when the blood is beginning to coagulate in the interior of the sac, the coats of which are very considerably thickened. At this time, if you press on the artery, you may empty the sac in part; you will see the swelling re-produced when you take off the pressure. You cannot completely empty the bag by pressure, for a considerable degree of the swelling will still remain. There is some degree of pain in the limb below in this stage of the disease, in consequence of the size of the swelling and the pressure on the surrounding parts. The aneurism becomes a solid swelling, instead of a mere bag containing fluid blood, and the circulation is retarded by the pressure on the surrounding parts.

In the next stage the aneurism has acquired considerable magnitude, and the pulsation is in a great degree lost. Pulsation may be observed in some one part opposite to the opening from the artery, but it is seldom perceived over the whole swelling. A small portion of the blood still continues in a fluid state, but the greater part of it is filled with coagulum. In this state, if the aneurism be behind a joint, the motion of that joint becomes impeded. Popliteal aneurism is one of very common occurrence: there is an enlargement behind the knee, just at the bend of the joint, with a pulsation; the foot and leg of that side are

swollen; the swelling gradually increases, and the aneurism becomes of a dark colour; inflammation of the cuticle covering the sac ensues, vesication of the cutis to the size of half-a-crown takes place, and the skin in this part is quite insensible. In a few days an eschar is formed, the bag opens; bleedings, one after another, take place, and the destruction of life is the consequence. What you read in books respecting the mode in which death is produced in these complaints is, that the sac bursts, and the patient is destroyed by the sudden gush of blood; but, I tell you, Gentlemen, it is no such thing; it is not from the sudden bursting of the aneurismal bag that the person dies, but by repeated bleedings from the part. At first the bleeding is small, but as the eschar increases, and the separation of the parts takes place, it becomes more; the wound is produced by means of the sloughing process, like a slough in any other part, and an opening is formed which leads into the aneurismal bag. At the commencement, the wound is small, and blood issues from the part; lint is applied to the wound, and the hæmorrhage is stopped; but as the eschar proceeds, and the size of the wound increases, the hæmorrhage returns; and thus, by repeated hæmorrhage, destruction of life is produced, and not by any sudden discharge of blood from the sac; it is not in aneurism of the extremities only that death thus takes place, but in aneurisms that occur internally;—in the chest, for instance, the same circumstances happen as I have just mentioned. Aneurisms, if not operated on, are not always destructive of life. I have seen gangrene of the foot and leg, as far as the knee, from aneurism, take place, without destroying life. I saw a case where the foot and lower part of the leg became gangrenous in a man labouring under popliteal aneurism; they sloughed off; amputation was performed just above the ancle, and the patient recovered. Destruction of life, then, takes place in aneurism from repeated hæmorrhage and gangrene. Gangrene of a small part of the limb in aneurism may occur, and still be remedied by means of surgical aid.

The history of *internal* aneurism is different from that of the external. I will describe it to you in a few words, though the subject is by far too ample to be properly treated of at present. I mentioned

to you just now, in the definition that I gave you of aneurism, that there was an exception to it, and that was the heart itself, when the subject of aneurism. Here is an aneurism (*pointing to one on the table*) of the heart: this and two others are all that I have ever seen; for what are often called aneurisms of the heart are not really so—they are a simple dilatation of the ventricles. An aneurism of the heart consists of a bag formed out of the parietes of that organ, and in this bag an opening is formed, as in the aneurisms which take place in arteries. In this specimen there is a bag formed of the parietes of the left ventricle, considerably larger than an orange, together with an opening which communicates with it. The other instances which I have seen of aneurism of the heart are the following:—A soldier of the Guards had committed some offence, for which he was severely flogged; being a determined fellow, he resolved not to cry, and whilst he was receiving the punishment he held his breath; a short time after this he was seized with violent pain in the chest; Mr. Palmer, surgeon to the Guards, was sent for, and he found him dying, as he thought, of ascites and œdema of the lower extremities. He soon died, and on examination it was found that there was an aneurism of the left ventricle, which had burst, as the pericardium was very much distended with blood. Mr. P. of Chichester, surgeon to the Militia, was sent for, to see a man who had symptoms of diseased heart, and intermitting pulsation; he had also ascites and œdema of the lower extremities. This man died, and there was found an aneurism of the left auricle. A curious circumstance in this case was, that the blood had insinuated itself into the coats of the left auricle; the aneurism was of the size of a walnut; its coats had given way, and Nature, as it were, thus unloaded herself. These three cases of aneurism of the heart are the only ones that I have seen.

Aneurism of the Aorta.—Aneurism of the ascending aorta, just at its commencement, where it is covered by the pericardium, is not of uncommon occurrence. Here are two examples of aneurism in that situation (*pointing to the specimens on the table*) of the size of a walnut; they had burst into the pericardium, which, on examination, was found filled with blood. I will give you a

singular case, in order to put you on your guard, as you must expect to meet with thorns as well as flowers in the profession. A man was brought to the other Hospital labouring under popliteal aneurism; I told him he must submit to an operation. In order to have the principal artery of the thigh secured, he sat down on the table, and was placed in the usual position; before I had quite reached the sartorius muscle, I saw him stretch himself on his back, and perceived urine coming from the penis. I immediately said, This is more than the expression of pain and the apprehension of danger. He got up, made a gasp; I took out a lancet, opened a vein, but no blood came. I then tried to obtain some from the jugular, but in vain;—in three minutes he was quite dead. I said, Gentlemen, as you have seen the death, you shall see the examination. He was conveyed to the dead-house; and the next day I opened the chest, and found the pericardium distended with blood, containing from a pint to a quart; and at the beginning of the aorta, just above the valves, there was an aneurism of the size of a walnut, which had burst. It is well that in this case the ligature was not applied, or the principal vessel divided, else the surgeon would probably have had the credit of killing the patient. I mention this case to put you on your guard, that you should never operate for aneurism till you have ascertained whether there be one situated in any other part; for it frequently happens that aneurisms attack several parts at the same time. This I know, that a man came into this (St. Thomas's) Hospital, with popliteal aneurism; and the operation was about to be performed, when, on account of a pain in the abdomen, it was postponed. Before the next operating day, he had died suddenly, and on examination an aneurism was found between the two emulgent arteries.—Well, then, before you operate for aneurism, see whether there be pain and pulsation in any other part.

MEDICAL REVIEW.

A Treatise on Practical Cupping, by SAMUEL BAYFIELD, 12mo. pp. 176. E. Cox and Son, *Borough.*

STUDENTS, while completing their surgical education in London, seldom devote any portion of their time or attention to the more common operations of surgery; but, attracted by the reputation they see attached to the higher

operations, which it often falls to the lot of their preceptors to perform, they culpably allow almost every opportunity of improvement in the former to pass by without availing themselves of it; a circumstance which too many have occasion deeply to regret in after-life. The volume before us treats of one of those operations which, though it possesses so little attraction for the generality of students, is not on that account the less important for them to be acquainted with; and for their instruction this Treatise is expressly intended. The author is an individual well known for his skill in the art of cupping, therefore we expect to find in this work matter that will interest and instruct those for whom it is particularly written. After making some introductory remarks, Mr. Bayfield gives a short account of the origin and progress of the art of cupping, from the earliest period up to the present time; but as there is nothing not already well known related in this history, we shall proceed to the next part of our author's subject:—the manner in which the operation should be performed, and a description of the instruments at present used in its performance. The cupping apparatus now in general use in this country consists of a scarificator, glasses, or cucurbitulæ, and a torch or exhausting lamp. The following is the description given by our author of the scarificator:

"This is an appellation by which the lancets and their containing spring-box is designated. The external form of this is so generally known as to need no description; nor is its figure of much consequence; perhaps the octagonal shape is handled with the most facility. It is generally fitted up with two rows of lancets, of five in a row, which act in the same direction from left to right. An alteration has, however, been made in the construction of this instrument, known by the name of '*Fuller's Improved Scarificator*,' the peculiar property of which is, that the *two* rows of lancets move in *contrary* directions, performing their half rotatory motion on the axis of the pinions, from the centre to the circumference. These pinions can be removed from the box for any purpose necessary; but principally, that the lancets may be sharpened or repaired. A screw in the centre of the box, to which a knob is affixed at the bottom, allows the plate at the top, through which the lancets pass, to be either elevated or depressed, so as to give the lancets any length that is thought proper." Page 97.

This is the scarificator to which our author gives the preference; in fact, he states, that he uses no other.

The cucurbitulæ, or cups, are the vessels placed over the scarifications, immediately after

the incisions have been made; glass ones are those now employed: concerning these, Mr. B. says:—

"The glasses which I use are of three series; of each of which there are three in number. Those of the first series are three inches in diameter, and the same in depth, with a *flat* rim, measuring about one-eighth of an inch wide. Those of the second series measure two inches and a quarter in diameter, and three inches in depth. The third and smallest size are two inches in diameter, and two and a quarter in depth. These glasses are contained (for the purpose of being rendered portable) in a cylindrical case, nine inches in length, and about four inches in diameter; each glass is enveloped in a flannel bag that renders it secure from being broken, which their jarring together might occasion." Page 100.

The size of the glasses must vary according to the part on which they are to be applied; thus behind the ears, and the angle of the jaw, on the forepart of the neck, on each side of the trachea, on the temples, and various other parts of the body, they must be of a small size and oval figure. Our author thinks glasses of a small, in many cases, preferable to those of a large diameter; and his observations respecting the size of the rim proper for the cupping glasses are entitled to attention.

"It will be right here, (says Mr. B.) to make a remark respecting the rim proper for cupping-glasses in general. It should be broad and flat, instead of being thin and rounded, as it usually is. The thin edge, if the part to which it is applied happen to be irritable or tender, or if it be placed over an inflamed viscus, occasions a good deal of pain; besides which, it produces such a degree of indentation in the skin around the fracture, as to cut off all communication between the vessels beyond the area of the cup, and those within it; and if a cup of this construction be used on a part where there is but little cellular membrane, adeps, muscle, &c., interposed between the skin and the bone (as the temple), the stricture will be so complete, that there is little chance of obtaining any blood. The small temple glass should, therefore, most particularly be made, with a rim at least *one sixth* of an inch wide."—Page 105.

The torch or exhausting lamp generally used, is thus described by our author:—

"This is a cylindrical tube of brass or silver, three inches and three-quarters in length, and half an inch in diameter. The upper extremity terminated by an oblique section, the lower one ends in a screw, which is received into a globular bulb of the same metal, of one inch in diameter. As many folds of cotton as will make a cord the size of the cylinder, or at least so large

as scarcely to be admitted into its orifice, is to be passed into its cavity, twisted round and forced onwards, until it reaches the other extremity, when the bulb may be screwed over it; and if this be properly done, the cotton will be lodged so firmly in the tube as to require a considerable degree of force to remove it. The end of the cotton is next to be cut off, so as to leave about *half an inch* projecting from the end of the tube."—Page 109.

The instrument just described might be put into a small case, which the surgeon could carry in his pocket. Various alterations have been proposed in the above instruments, but as they do not appear to be improvements, we shall not discuss their merits; and our author has, we think, very judiciously abstained from commenting on them more than he could well avoid, particularly when we consider the object for which this work was written. In addition to the instruments above-mentioned, there should always be at hand, a wash-hand basin; a piece of fine sponge; a small bottle of rectified spirit of wine; a lighted taper; a jug of warm water; some folds of lint; a piece of adhesive plaster, or of black court plaster; a box of cerate, either of wax or spermaceti; and two or three napkins.

Having described the instruments and apparatus required for cupping, we come next to consider the manner in which it should be performed. The spot on which the glass is to be placed being determined, and the lancets of the scarificator set to a proper depth, our author says:

"The cups are to be immersed in some hot water till they become warmed. The part itself should be fomented with hot water; and the operator having poured two or three drachms of the spirit into a cup or glass, takes the torch in his *right* hand, and a cupping glass in the *left*, and places the *lower* edge of the glass, in contact with the skin, (in the exact spot where it is to be affixed) elevating the edge at the opposite side of the glass about an inch and a half from the skin: the wick of the torch is now to be dipped into the spirit, lighted at the taper, and carried under the glass *to its centre*, where it is suffered to remain about *two seconds:* it is then to be withdrawn quickly, and if it has been properly performed, the operator will feel the glass sink from his fingers, and fix itself to the part; the skin, rising slowly into the glass until it occupies nearly one third of the space within it."—Page 120.

The glass having remained on for about a minute it is then removed, and the scarificator is applied to the spot before the tumefaction has subsided, the glass is again exhausted and put on as before. The air contained within the glass is rarefied by the flame

of the torch; it is rendered by this means specifically lighter; this becoming condensed as the glass cools, a considerable suction takes place. The principle of the operation is very simple. The pressure of the atmosphere on the skin beneath the glass being removed, whilst it remains the same on the glass and skin around, the blood is immediately driven to the spot from which the pressure has been taken away.—The removal of the glasses from the body after they become about three parts full, requires some care and nicety to prevent the blood running about the patient after the bleeding has ceased; some simple dressing is to be applied to the incisions; and if the hæmorrhage should be very troublesome, a little turpentine to the part will soon stop it. Any one acquainted with the principle of the operation, and possessing the slightest mechanical knowledge, will be able to overcome the difficulties that will be met with in various parts of the body, where it may be necessary to cup.—Practice alone will give dexterity in the performance of this operation.

From the work before us, it is very apparent that Mr. Bavfield thoroughly understands the subject on which he has written; he has put the whole of his knowledge into that order and form, from which good practical rules may be drawn; and though some parts might have been omitted without defeating the object our author had in view in composing this treatise, yet to those who have the art of cupping still to learn, we can sincerely recommend the volume before us as containing directions with which they should become acquainted before they begin; and those who are conversant with the subject will be amply repaid the time they may bestow on the perusal of this work, by the soundness of the observations contained in its pages.

MEDICAL AND SURGICAL INTELLIGENCE.

To the Editor of THE LANCET.

MR. EDITOR.—At the last meeting of the Medico-Chirurgical Society, after a very interesting discussion on the effects of arsenic on the human stomach, and the propriety or not of administering solvents where that poison had been taken in large quantity, Mr. Earle called the attention of the society to the subject of contractions after burns; and exhibited to the members present an instance in which he had succeeded in restoring a limb to its perfect use and proper shape, which had been, for years, frightfully contracted and useless. This case he brought forward as an additional fact in corroboration of the practice which he recommended in a paper published in one of the former volumes of the Society's Transactions. The case was most interesting,

and completely satisfactory, and was highly creditable to British Surgery. My reason for addressing you, Sir, upon the subject, is, to afford you an opportunity of correcting what I conceive must have been an error of the reporters of Sir A. Cooper's Lecture on Cicatrization and Contractions after Burns*, wherein Sir Astley is made to say, that contractions after extensive burns cannot be prevented; that the surgeon is not blameable, who permits such contractions to take place; and that very little or nothing can be effected by art in removing them, except where the bridle is very narrow. Surely, Sir, this cannot be a correct report of Sir Astley's Lecture, or that gentleman must be ignorant of the papers published by Mr. Earle, in the Medico-Chirurgical Transactions, in which the nature of such contractions is ably explained; a plan of modifying Nature's process suggested; and a new method of relief, founded on just views of the laws which regulate the animal economy, proposed and successfully illustrated by several highly interesting facts. After perusing those papers, and witnessing the very successful example brought forward at the last meeting of the Society, I must confess my astonishment at reading your report of Sir Astley's Lecture.

I am, Sir,

Dec. 18, 1823. C. G.

* Our report of the Lecture was perfectly correct.—ED.

MR. SCOTT'S REPLY TO MR. ALCOCK.

To the Editor of THE LANCET.

SIR,—Your correspondent, Mr. Alcock, has favoured us with a tedious and laboured voluntary, to prove that the proposal of emptying the stomach by mechanical means does not belong of right to the persons who claim it. I could, with much less trouble, vanquish Mr. Alcock with his own weapons, and show how far he is indebted to M. Roux for his apparatus to remedy the *cleft palate*.

Mr. Alcock's *ostensible* motive in disputing the right of modern claimants, is "justice to his professional brethren, and to obviate the stigma which must attach to them, if they could be supposed ignorant of the mode of treatment above alluded to, many years after its practicability *had been demonstrated and published to the world.*" The incorrectness of this position will teach his professional brethren the true value of such a champion. I repeat, that this is Mr. Alcock's *ostensible* motive, but I can scarcely regard it as the *real* one: for who would take the trouble that Mr. Alcock has done, to rob his brother practitioners of *merit*, by an elaborate dissertation, the dry detail of which does not in the least contribute to his own, except under a malignity of envy that I am unwilling to believe even Mr. Alcock pos-

sesses. This part of the account, then, I must leave him to settle with himself.

I should be the last man, Sir, to build an ambition for fame upon any improvement I might have been fortunate enough to make in prosecuting the labours of my profession; much less would I endeavour to establish my own credit upon the merits of another. Whatever share, then, I may have had in the subject before us, partakes neither of the vanity of the former, nor the injustice of the latter; and in this sentiment I may strictly join my friend and co-experimenter, Mr. Jukes, which I shall endeavour to show by the following statement.

In May, 1822, the *Archbishop of Armagh* died, from a quantity of laudanum administered by mistake. Shortly after this event, Mr. Jukes, in a conversation with me upon the means that were used for the prelate's recovery, observed, that he believed some mechanical means might be devised for emptying the stomach, in cases where the patient was comatose, and the excitability of this organ exhausted. He asked me if such invention had ever been attempted; I replied in *the negative*: for, though I had Orfila's excellent treatise by me, I never heard of the paragraph pointed out by Mr. Alcock, until I saw his letter in *The Lancet*; nor was either Mr. Jukes or myself aware that Boerhaave had suggested the practicability of such an operation. Our ignorance of any previous inventions is proved (as far as circumstantial evidence can prove it,) by the instruments we adopted, which were merely a tube and bottle, "*the least powerful mechanism that can be used for a pump*," as Mr. Alcock justly remarks. Is it then likely that we should have chosen such an apparatus, if we had been acquainted with a better?

We ought perhaps to take some shame to ourselves that we were not acquainted with Boerhaave's suggestion, and with Dupuytren's and Renault's instruments; but we share the odium at least with the greater part of our professional brethren, among whom are included even those of the higher walks. I contend, therefore, that as it regards ourselves, the revival is, in fact, a *discovery*, whether any credit be due upon it or not. The claim of Sir Isaac Newton to his discovery of fluxions was well substantiated, though Leibnitz had preceded him.

But the most important part of Mr. Alcock's communication is the *garbled* extract he has made from Orfila's work; by which the reader is left to conclude, that M. Renault had actually used his instrument upon *the human* stomach. It is quite impossible that this error can have been unintentional; not even Mr. Alcock's detected ignorance of the French language (and he can-

not have forgotten the corrections he some time ago received for his translating blunders) can assume such a fact. The following lines, which occur in the very heart of the passage quoted by Mr. Alcock, have been *altogether omitted*:—"*When some trials upon man*," says M. Renault, "*have proved its efficacy*, the use of it will doubtless become very extensive." Does not this, then, leave to Mr. Jukes the sole merit of first employing the instrument upon the *human* stomach? And does Mr. Alcock make no distinction between M. Renault's experiments of pumping water into, and out of, the stomachs of "several *little dogs*," and those of Mr. Jukes, made fearlessly upon himself, with a quantity of poison more than sufficient to destroy the life of the strongest man? If no credit be due to Mr. Jukes' ingenuity, surely the thanks of the profession, and of the world too, ought to be given him for his boldness in being the first to submit to the operation, and for his readiness in repeating it for the satisfaction of his professional brethren.

Let not Mr. Alcock reproach us with ignorance of a previous existence of this instrument; but let him rather take shame to himself, that, with his knowledge of it, he had never made the good use of it of which it is capable. It is to the eternal disgrace of every Surgeon *previously* acquainted with it, that so many valuable persons have been watched to the silent grave, when the use of this instrument might have saved them. But now that the application of it has been made, every body, forsooth, could have done it. After Columbus had visited America, every body knew the way thither; and they found it easy to set up the egg when they saw him break a hole in the extremity.

In conclusion, I would remark, that the perforation of the tube ought not to be at the extreme point, but *at the side*, in the same manner as the eye of the flexible gum catheter. This we have practically ascertained; for in the operation, the extremity of the tube rests upon the depending surface of the stomach, and when the piston of the syringe is drawn out, the stomach itself is forced into the tube, and serious mischief might be the consequence. In my experiments upon Mr. Jukes, this circumstance several times happened, and the pain occasioned was dreadfully severe. To prevent this, we concerted a signal, by which he intimated to me whenever an occurrence of the pain indicated this accident.

In operating, therefore, upon a *comatose* person, the surgeon should withdraw the piston slowly and cautiously; and should he find it rise with difficulty, and recede a little upon quitting his hold, he may conclude that the tube is obstructed, either by a portion of

solid matter, or by the stomach itself; and, lest it should be the latter, the tube should be withdrawn a quarter or half an inch further out of the mouth, and the piston be driven back, so as to force out the included part.

I am, Sir,
Your humble obedient servant,
JAMES SCOTT.

30, *Newington Causeway,*
Dec. 17th, 1823.

GUY'S HOSPITAL.

Dec. 17th.—John B., aged 22, was admitted into this Hospital, at four o'clock P. M., with an extensive injury of the left fore-arm, from a gun-shot wound. The integuments and muscles on the inside of the arm were lacerated; the radius was fractured and comminuted; the ulna was fractured, and the fingers were quite benumbed; he had not lost much blood. Amputation was immediately performed, and the arm was removed about two inches below the elbow-joint. The operation was performed by Mr. Key. On examining the limb afterwards it was found that the flexor sublimis and profundus were completely torn through; the median nerve divided, and the ball resting against the ulnar nerve; the bones were in the state just described; the course of the wound was obliquely downwards and inwards, beginning on the edge of the radius about four inches below the elbow, and terminating two or three inches above the wrist. To-day, (Dec. 19th,) the man feels pretty free from pain, and is doing very well.

January 30th. The stump has quite healed.

ST. THOMAS'S HOSPITAL.

Case of severe burn.

Ann T., aged 30, servant, was admitted into St. Thomas's Hospital, half-past eleven, A. M., Dec. 16th, with a severe burn of the head, face, and neck. Her mother says, that about half-past ten this morning she was obliged to go to market, and left her daughter at home by herself; during the mother's absence the daughter was seized with an epileptic fit, (to which she has been subject more or less these sixteen years past,) and on returning home, after being absent a quarter of an hour, she found her daughter lying on her back by the side of the fire place, with the upper part of the clothes (those about the head and neck) in flames: it was full twelve minutes, however, before the fire could be quite extinguished, when she was immediately brought to Mary's Ward, in this Hospital.

The parts burnt are, the whole of the face, (particularly the right side,) the right arm, the posterior part of the

neck, head, and upper part of the back, the throat and superior portion of the chest; on the arm and throat, chest and neck, the cuticle was destroyed, and these parts were black in some places; on the face the cuticle was neither raised nor destroyed, except on the nose and a little towards the left side; to the former places, viz., those where the cuticle was destroyed, turpentine was applied; to the latter, viz., where the cuticle was not destroyed, linseed oil and lime-water; the burnt places are covered over with coarse linen wetted with the different applications, and these are renewed frequently. When brought to the Hospital she was quite sensible; screamed a good deal; the pulse was scarcely perceptible; an aromatic mixture, six ounces, was ordered for her, containing two drachms of tincture of opium; of which three meat-spoonsful are given to her every half hour; a tea-spoonful of brandy is also given every half hour. At five P. M., the mixture was altered, some stimulating cordial being added to it, and a bolus containing some ammonia and camphor, to be taken every four hours, was ordered.

Seven, P. M. Dozing, breathing stertorous, 24 in a minute, pulse 96, weak; in the morning, when she was admitted, it was scarcely perceptible; bowels not open; has been addicted to spirituous liquors, and has also been in the habit of smoking; she is of a strong constitution.

Wednesday, Dec. 17.—A little after seven last evening, she was seized with a fit, during which she moved the right arm a good deal, shook her head, closed her teeth, and stretched herself quite straight, this lasted for ten minutes, when she fell into a sleep again: the only warning she had of the fit, was a pain in the head. In the middle of the night she was very sick, and threw up some yellow fluid, and shortly after this had another fit, which continued on her five minutes. At 6 o'clock this morning, she got out of bed, and it was with difficulty that the nurses were able to get her in: since that time has been very drowsy.

Four, P. M. Lies on her back half asleep, occasionally moving and raising herself in bed. Breathing very loud and oppressed, 24 in a minute: pulse very weak, intermits every 10th beat, 120. Heart's action very weak; bowels not open since the accident.

State of the burns.—Right arm of a blueish appearance, and quite hard; face white, with small vesicles in different parts; neck and chest of the same appearance. The same applications are continued to the part; a table spoonful of brandy is given her every half hour; the mixture and bolus, ordered last night, every four hours. At half-past one, she had an injection, which has not yet operated. The enema was composed of two table-spoon-

fuls of castor oil in a pint of gruel.

18th. Was very restless at times in the night, so that she was with difficulty kept in bed. When she became quiet she again fell into a dose: asked frequently in the night for water to drink. Has been sitting up in bed during the day. Pulse scarcely to be felt. Respiration very weak. Right arm and hand nearly of the same colour as yesterday: face much less swollen; neck and chest quite red, the skin being removed. The whole of the back is also very red, and in some places the skin raised. This part was not burnt, but the skin has most likely been irritated by the turpentine. The turpentine has been ordered to be discontinued this day, and the lime-water and oil substituted for it. The quantity of opium in the mixture was increased last night; two table-spoonfuls are given her, as before, every four hours. A powder with jalap and calomel was given her today, and repeated in three hours after. Bowels have not been open; another injection has been given her in addition to the one mentioned yesterday. Her feet and legs are very cold, and have been ever since her admission.

19th. She continued drowsy during the whole of the night. The left arm became much swollen in the course of the evening. At a quarter before three this morning she gaped a good deal; and at three A. M. died.—Her bowels had not been open during the whole of the time.

Upon examining the body, there was found effusion of serum between the membranes and into the ventricles of the brain.—The bronchiæ were also very much inflamed, and full of thick mucus.

Observations on the Use of Iodine in the Treatment of Scrofula and Leucorrhœa. By DR. SABLAIROLES.

AFTER a series of accurate observations, and an experience of two years in more than 200 cases, M. Coindet assures us, that Iodine is one of the most powerful stimulating remedies in diseases of the lymphatic system. This substance, therefore, affords us a powerful resource in the diseases which often resist all other therapeutic agents. As useful discoveries cannot be too widely diffused, it is a duty which we owe both to the profession and to humanity to publish the three following cases, which appear to us to establish the success of Iodine and its preparations in the treatment of Scrofula and Leucorrhœa, which will contribute to remove the reluctance which many practitioners, otherwise enlightened, have to its employment.

First Case.—Fabre, aged 14 years, born of scrofulous parents, had the glands of his neck affected with scrofula for

the last six or seven months. A variety of remedies, regularly administered, had produced no good effect. Having been called to this patient, and wishing to ascertain the effect of iodine on the animal economy, I did not hesitate to make a trial of it. I prescribed, therefore, according to the recommendation of Messrs. Coindet and Gimelle, an ointment composed of two ounces of hog's-lard, one drachm of hydriodate of potash: and I ordered half a drachm of this ointment to be rubbed into the swelled glands every evening until it was completely absorbed. It may be useful to observe, that previous to the frictions, I used for three or four days emollient fomentations, which are well calculated to assist the action of the medicine. For some time past the patient was unable to digest even the lightest food without difficulty, and his countenance was extremely pallid. His sleep was disturbed, his flesh soft and flaccid, his strength much prostrated, and his sight was becoming daily weaker. He was melancholy and desponding to a degree which it would be difficult to describe. On the third day of the frictions, the patient experienced a sense of heat and dryness in the stomach; there was a little tension and frequency in the pulse, and his respiration was somewhat accelerated. He took some drink slightly acidulated, which mitigated these symptoms, and afterwards continued the frictions. Nine days elapsed without any sensible diminution of the swelling, when I resolved to increase the dose to a drachm at each friction.

By this means, at the end of eleven or twelve days, the patient recovered his appetite; his digestion was improved, his mind became more tranquil, his strength increased daily, and a short time after the swelling had almost entirely disappeared. By persisting a little longer in this treatment, the cure of the patient, which was before considered hopeless, was completely effected.

Second Case—Mad. B., aged 26 years, of a lymphatico-sanguine temperament, experienced about a year and a half ago, some domestic misfortunes, which rendered her extremely melancholy; soon after she had *fluor albus*, followed by severe pains. Subsequently she had hysterical affections and cramps of the stomach, with violent cholic. Her digestion was bad, and she sometimes vomited bilious matter I recommended some medicines which rather aggravated than relieved the disorder. I then prescribed the syrup of iodine in a dose of one table-spoonful morning and evening, in a cup of pectoral infusion. I advised, at the same time, as much amusement as possible, as likely to contribute to her cure. In about a fortnight the running had abated; the patient had recovered her spirits, her appetite was restored, and her

digestion improved daily. In short, she was much relieved, but her weakness still continued. Encouraged by this success, I ordered another dose of a table spoonful to be taken daily at noon, and I substituted infusion of gentian for the pectoral infusion. To my great satisfaction she continued to amend daily, and in less than six weeks the running had entirely disappeared. Mad. B. continued to pursue this plan of treatment for a short time longer. Her strength is now completely re-established; her colour has returned, and she takes exercise with pleasure; in short, she enjoys a state of health which some months ago could scarcely have been hoped for.

Third Case.—Catharine P. leading a sedentary life, and indulging immoderately in the pleasures of coition, was attacked, after a difficult labour, with a uterine discharge, for which she at first used no remedy; she acknowledged to me that she even felt a stronger desire for coition, which no doubt contributed to increase the complaint. At length she complained of pains in the back and loins, with heat in the region of the matrix. The discharge became so abundant that it soaked through her outer garments. Her stomach was in a state of extreme debility; she became daily thinner, and her strength was prostrated. As the leucorrhœa was at this time so acrid as to excoriate the parts, and as the patient had severe pains in the cavity of the abdomen, I was called for. I found her in a very alarming state, her face was pale and sunk; her eyes surrounded with a livid circle, which was more visible as the fluor albus became more abundant: her features were impressed with marks of the deepest melancholy. I had recourse, on this occasion, to the happy discovery of M. Coindet, after removing, by the usual means, some slight inflammatory irritation. After this preparation, which it is very important not to omit, I prescribed the tincture of iodine in the dose of ten drops three times a day, in a mucilaginous potion. Finding its action, however, not sufficiently marked, I increased the dose gradually to 18 drops: to be taken three times a day. In about two months the running had entirely ceased, and Catharine P. had recovered her former state of health.—*Journal Universel des Sciences Medicales, Novemb.*

Copenhagen, Nov. 18.

Dr. Herbolt, of this place, has just published an account of an extraordinary pathological case, which is attested by thirty-four physicians. A young Jewess, of delicate constitution, had enjoyed a good state of health up to the age of fourteen years. At this time she began to suffer excruciating pains, which continued for

eighteen months, and in the course of this period there were extracted from different parts of her body, at intervals of several days, weeks, and months 273 needles! Some time after about 100 more came out from a tumour in the shoulder which was attended with violent pain, and symptoms which threatened her life. They were for the most part sewing needles, but broken, without heads or points, and almost all of them black and rusty. Three pins were found among them, which were still bright, and one of the kind commonly used for the hair. In his statement the doctor has described with precision the parts of the body from which they were extracted, but he has not offered any conjecture as to the manner in which they could have entered the body of this young person. He promises another paper on the subject, in which, we trust, he will satisfy the curiosity of the public.—*Journal des Debats.* The particulars of this case will be found in THE LANCET. Vol. VIII, p. 240.

LECTURE XX.

ON ANEURISM.

TOWARDS the conclusion of the last lecture, we spoke to you of internal aneurism. We described to you aneurism of the heart; and gave you two instances in which there was an aneurism of the left ventricle —not a mere dilatation, but where the parietes had given way, and a bag formed, into which the finger might be introduced: we next came to aneurism of the ascending aorta, where it is covered by pericardium; and related to you some cases where the artery had burst, and large quantities of blood were found in the pericardium.

We shall now speak of aneurism of the ascending aorta. When an aneurism takes place between the heart and curvature of the aorta, you find that, after a time, from the pressure of the aneurismal bag, the cartilages of the ribs become absorbed, as in the specimen before me (pointing to one on the table), where the cartilages of three of the ribs, and a portion of the sternum, have been absorbed; when the aneurism presses on the lungs, dyspnœa comes on, together with cough, and the complaint is obscure, but at last the fulness on the right side, and the pulsation to be felt by the pressure of the hand on the intercostal spaces, will enable you to distinguish this disease; then the ribs become absorbed, the aneurism presses against the pectoral muscle, absorption reaches the skin, and the sac bursts by the inflammation of the skin, the destruction of

the life of the part, and the separation of the eschar. I will mention to you a case which shows how life may be prolonged sometimes by the formation of an artificial sac: a female in the other hospital had an aneurism of the ascending aorta, the skin had become inflamed, the eschar was separating, and a small quantity of blood was discharged; a clot of blood plugged up the orifice of the opening; pieces of lint were applied, over which was put some adhesive plaster, and lastly a bandage. She lived twenty-seven days afterwards; the opening of the wound however gradually increased, and she died in consequence of inflammation of the interior of the aneurismal bag and aorta.

When, therefore, you are called to a person with an aneurism in this part, and when hemorrhage has come on, you can protract life by coating the wound with lint, and endeavouring to form an artificial sac: and by this means you give your patient two or three days, or weeks, to live, allowing him that time for making any preparation he may wish. These cases are, however, quite hopeless, and I have never known one spontaneously cured.

Aneurisms of the Curvature of the Aorta.—These aneurisms are very frequent, and are to be seen just above the sternum. You will find that termination of existence takes place in different modes in these aneurisms. In the specimen before me (exhibiting one on the table), death was produced by the bursting of the artery into the trachea; it was given me by Mr. Davis, and was taken from a man, the subject of aneurism of long existence; rising from his bed one day, the artery must have burst into the air tube, cough came on with a sudden gush of blood, and he died, partly from suffocation, and partly from loss of blood. An aneurism of this kind often causes, by its pressure, dyspnœa and suffocation; it also often presses behind on the œsophagus, instead of in front on the sternum; it will be seen in the back, through the ribs, by the edge of the scapula, between its base and the spine. Now, Gentlemen, I will tell you one or two practical points here, to put you on your guard, and induce you to take great care in these cases. Mr. Dyson, of the city, called on me one day, and said that he had a patient with aneurism in the neck, which he thought was an aneu-

rism of the carotid, and that he should like me to see it. I immediately went with him, and on examining, midway between the clavicle and lower jaw, there appeared to be a collection of fluid proceeding to behind the sternum. I told Mr. Dyson, that I was very doubtful of its being an aneurism of the carotid. Some time after this, Mr. D. sent for me to go with him to examine the body of this person; we found a small pouch, just behind the sternum, proceeding from the curvature of the aorta. It was of very great importance that a ligature had not been applied; the sac would have been cut through, and destruction of life taken place. The late Mr. Burns, of Glasgow, who was an excellent anatomist, and who published a capital work on the anatomy of the head and neck, wrote to me to say that he had a case of aneurism above the clavicle, and entertained some thoughts of tying the subclavian artery for it, and asked me some question relative to it, to which I returned an answer, and said to him, Take care, do not deceive yourself, for what often appear to be aneurisms of the subclavian artery, are really aneurisms of the aorta. The operation was not performed. [It is mentioned in Mr. Burns' work.] The patient afterwards died, and on examination it was found that it was an aneurism of the aorta; therefore I mention this to put you on your guard, for after what you have lately seen at Guy's Hospital, don't think the operation an easy one, and that it would add greatly to your credit to perform it. You might very easily mistake aneurism of the aorta for an aneurism of the carotid or subclavian arteries.

Aneurism of the Arteria Innominata.—These cases in general do not allow of an operation being performed; there is no room for the ligature. Dr. Mott, of America, has put a ligature on this vessel; and for a time the patient appeared to be doing well; but he afterwards died. The operation did him much credit: few would have dared to perform it; and those who might have dared, probably would not have known how. Dr. M. is an excellent anatomist, and an industrious man.

Aneurisms of the Descending Aorta.—When the descending aorta is the subject of aneurism, in its course through the posterior mediastinum, it very often breaks into the œsophagus, as in the

preparation before me (pointing to one on the table), and a similar instance of which may be seen in the museum of the other hospital; when an aneurism presses on the œsophagus, adhesion of the coat of the sac to the œsophagus takes place, and afterwards an opening between the aneurismal bag and gullet is formed; the patient vomits a considerable quantity of blood, and soon dies. I have seen three instances of this kind of aneurism in persons who have died of some other complaint.

Aneurism of the Abdominal Aorta.—When the aneurism is situated above the cœliac artery, a pulsation may be distinctly felt at the scrobiculus cordis; and a symptom which distinguishes this complaint is, that the pressure on the stomach caused by the aneurismal bag, produces nausea and vomiting, and small quantities of food are immediately rejected. There was a case in this hospital of aneurism just above the cœliac artery, where the patient had frequent vomiting, constant nausea, and could not bear to take any food. When the aneurism is lower down in the cavity of the abdomen, it often bursts into the intestine. Here is a specimen (holding it in his hand), where there is an opening in the jejunum and the fore part of the aneurismal tumour of which the patient died. It was taken from a near relation of an eminent physician. Dr. S. brought him, in order that I might give my opinion of a pulsation in the abdomen; he dined with me, we made as light of it as possible, and he was very cheerful at dinner; three weeks afterwards I was sent for to Henbury to visit him; he was seized with discharge of blood by stool; he revived a little, and hopes of recovery were entertained by his friends; the following morning, however, the discharge of blood returned, and he died suddenly.

When the aneurismal tumour presses on the spine, absorption of the vertebræ takes place, as in this instance (exhibiting a specimen); you will also find a large swelling in the loins; but you must be on your guard respecting this swelling, lest it be mistaken for any other complaint. One of the surgeons of this hospital, but who is since dead, had a patient with a swelling in his loins; this the surgeon took for lumbar abscess; he took out his lancet, and introduced it obliquely, when some florid blood issued by the side of the

instrument. Adhesive plaster was put to the wound, and it healed; he died, however, from the irritation of the aneurismal sac. On examination, it was found that the swelling was from the aneurismal tumour, the lancet had not penetrated into it, but wounded its coats. There is no pulsation to be felt in the loins from those tumours, nor was there any in the case I have just mentioned, and this is owing to the distance of the swelling from the aorta; thus men that are well informed in their profession may commit mistakes in these obscure cases. Aneurisms form in the cavity of the pelvis, in the ischiatic notch, and under the gluteus maximus muscle; you will be on your guard, therefore, when you find tumours on the nates. A man was sent from Gainsborough to the other hospital with an aneurism or tumour on the nates; I hesitated at first respecting its nature; hæmorrhage came on from the bladder, when it was immediately thought that the aneurism adhered to the bladder, and an opening into it had been formed, as was afterwards found to be the case on examination. This is all it will be necessary to say to you on the subject of internal aneurisms, as the symptoms will vary according to the seat in which the disease may be found; the digestive organs will be in fault at one time, the urinary at another, according to the part on which the pressure of the aneurismal sac may rest; from the variety of symptoms the diagnosis will of course be found to be difficult.

The Size of Aneurisms.—The aneurism before me is the largest I ever saw (a beautiful specimen was here exhibited): it begins in the aorta at the emulgent arteries, and extends into the cavity of the pelvis. It contained blood (and I am not exactly certain how much), but of an enormous weight. Here (showing another specimen) is a popliteal aneurism of considerable size. The greatest number of aneurisms that I have seen in one case is seven, and this specimen on the table was taken from the man to whom I allude. He died of an aneurism at the bifurcation; he also had one at the opposite ham, two above it, one in the groin, and two others. The iliac artery had been tied for femoral aneurism, and the patient did well for some time, but afterwards died. This man was a bricklayer's labourer; had been accustomed to mount ladders and carry weights upgreat

heights; had been in the habit of exercising his lower extremities a good deal: he was not very muscular, and the fatigue of his occupation was more than he could bear. I may observe here, that some aneurisms are local, and others general; when they occur in the ham they are frequently only local; but when between the groin and ham, or in the middle of the thigh, you very commonly find disease of other arteries. Therefore, in popliteal aneurism, you expect to find the aorta and larger arteries healthy.

The age at which aneurisms generally occur is from 30 to 50; at that age, exercise is considerable and strength less. In very old age this complaint is not so common. I have seen a popliteal aneurism in a man of 80, four or five years ago, at the other Hospital: on this man I tied the femoral artery, and he did extremely well. On a man of 69 I have operated, and that case did well. I saw a boy in this Hospital 11 years old, with aneurism of the anterior tibial artery. The man of 80 is the oldest, and the boy of 11 the youngest, that I have seen with aneurism. It is more commonly met with between 30 and 50, or rather between 30 and 40, than after that time. In cases of aneurism, the age is no objection to the operation.

With respect to the sex in which aneurism chiefly occurs, the male is certainly much more frequently the subject of it than the female. I should say that the proportion of males to females is about five to one; and if we take only cases of popliteal aneurism, the proportion of males would be considerably greater. When aneurisms do occur in females, they are generally internal. Females are rarely the subjects of aneurism in the limbs; the reason of which is, that they do not exert them so much as the other sex. In the course of my practice, taking Hospital and private practice together, I have seen about eight cases of popliteal aneurism in the female. The number of popliteal aneurisms which I have seen in the male is of course very considerable.

Of the Formation of Aneurisms.

It is necessary that you should clearly understand the manner in which aneurism is produced. The first circumstance that takes place in an artery which is about to produce an aneurismal swelling is, that it becomes opaque, and slightly inflamed. A small yellow spot appears in the part where the aneurism is afterwards formed, and there

is a slight efflorescence surrounding it. The process of absorption afterwards takes place, and thins the coat of the artery so that the texture becomes like that of a fine web. At the same time that this takes place, Nature begins to set up a process of defence, which is beautifully exemplified in a preparation (*it was exhibited to the class*) made from the first aneurism which I had an opportunity of dissecting. This was an incipient aneurism of the aorta; you perceive that the coat of the artery has been absorbed, and opposite to the parts absorbed you observe a layer of adhesive matter, by means of which a defence is set up for the coat of the artery, and the progress of the disease for a time resisted. A covering is thus produced by the adhesive inflammation which shuts up the artery, so as to prevent the immediate escape of the blood. This preparation not only beautifully illustrates this process, but, by holding a candle on the opposite side of it, you will also observe the opacity which I have just described. As the coat of the artery becomes absorbed, the cellular membrane is glued by this matter to the outer surface of the artery. The next substance which becomes absorbed, if it be an aneurism of the ascending aorta, is the pleura, which forms a portion of the aneurismal bag. Then the lung becomes absorbed, and forms a portion of the bag; next the intercostal muscles, with the cartilages of the ribs; then the pectoral muscle; and at last the skin itself, forming the parietes of the aneurism, give way, and there is no longer any thing to prevent the escape of the blood.

Every aneurism was formerly supposed to be produced by the dilatation of the coats of the artery; but it has been found that this is not the case. It is generally produced, not by the dilatation, but by the absorption of the coats of the artery. For this knowledge we are indebted to Scarpa, who first accurately explained the mode in which aneurisms are produced. He thought they were always produced in this way; but they are sometimes, though rarely, formed in the way in which they were formerly supposed to be uniformly produced; namely, by dilatation. Here is a specimen of an aneurism of the aorta, in which the pouch is formed by dilatation, the coats of the artery still remaining.—Aneurisms are now and then the effect of the bursting of an artery

under some considerable exertion. I have known two instances of this kind. A gentleman who was out shooting jumped over a ditch, when on reaching the other side his foot slipped, and he fell back into the ditch. At this moment he felt something snap in his ham, and when he attempted to walk he found himself lame from the accident. He was attended by Mr. Holt, a surgeon at Tottenham, and was afterwards brought to town, where he underwent the operation for popliteal aneurism. In this case the aneurism began to form within a very short time after the accident, and it was not more than from three to five weeks afterwards that the operation was performed. The other case in which I have known an aneurism produced by the bursting of an artery occurred as follows:—A gentleman whom I was attending for another complaint, in attempting to raise himself in bed upon his hands, felt something snap in his right hand. When I next visited him, he told me the circumstance, and requested me to look at his hand. Upon putting my finger upon it, I felt a pulsating aneurismal swelling. I tried what could be done by pressure; but as this did not succeed, I found it necessary to tie the radial artery at the part where we usually feel the pulse. In this case a bag of considerable size was formed by the cellular membrane, instead of the usual mode. A pointed body introduced into an artery will produce all the appearances of aneurism, and require the same treatment. In whatever way, in short, aneurism is produced, the surgical treatment of it will be the same. A curious circumstance may be observed in dissecting an aneurism, after having turned back the aneurismal sac. You would suppose that when you had made an incision in the parts, you would immediately find the cavity in which the blood is contained; but this is not the case. On the inner side of the aneurismal sac a wall of adhesive matter is deposited in layers, so as to enclose the blood as completely as the aneurismal sac itself. Here is a preparation in which the aneurismal sac has been taken away, and yet you find a bag remaining entirely formed of layers of adhesive matter on the outer side of the aneurism. The process by which nature throws up one layer of adhesive matter after another, until a complete bag is produced, is beautifully illustrated in this preparation.

You may distinguish aneurism from other diseases by the following marks:—If the aneurism be recent, by pressing your finger on the artery which leads to the aneurism, you will empty the aneurismal bag; but if the aneurism be of longer duration, and the pulsation be but slight, place yourself by the side of the patient, observe carefully the size of the swelling, and, by pressing your finger on the artery above, you will see the aneurism sink down as you make the pressure, though the sac will not entirely empty itself; and upon raising your hand suddenly, you will observe a jet of blood rush into the aneurismal sac, and raise it to its former height. In this manner an aneurism may be easily distinguished from another tumour deriving its pulsation from an artery: in the former case the pulsation will be felt over every part of the tumour, in the latter there will be no pulsation except in the direction of the artery. I have hurried over some parts of this evening's lecture, as it is my intention to show you the operation for popliteal aneurism, having a subject which will answer the purpose extremely well. I shall postpone, therefore, some remarks which I have to make upon the medical treatment of aneurism, and proceed at once to speak of the surgical operation for its cure.

Of the Cure of Aneurisms.

Aneurisms sometimes undergo a spontaneous cure. This is a circumstance which you should bear in mind, because in cases where they are so situated as not to admit of surgical relief, it is a consolation to the patient to know that these diseases now and then cure themselves. There are many examples of such a spontaneous cure: I have myself seen some, and many more are to be found in surgical and medical authors. There is a preparation before us, taken from a man in the other hospital, who had an aneurism, situated just below the groin, which underwent a spontaneous cure. He was sitting before the fire, in one of the wards of the hospital, when he felt something burst in the upper part of his thigh. On examination he found no blood had issued out, and, in fact, the aneurism had not yet reached the skin so as to be adherent to it. His thigh was, however, enormously swollen; he was unable to use the limb, and was put to bed by the other patients. For three days after

a pulsation was found in the aneurism; it then ceased, and the size of the limb began to diminish. At the end of four months the aneurismal swelling had considerably diminished, and he recovered the use of the limb. Six months after he first felt this sensation, and when he had been discharged from the hospital, I met him as I was walking across the square of the other hospital, I said to him, 'Why, Powell, you seem low-spirited; you ought to be cheerful, for you have had a very narrow escape.' 'Yes,' said the man, I am pretty well, Sir, except that I have something alive in my belly.' (*A laugh.*) 'I hope you have,' said I, 'for it would be rather awkward if you had not.' On putting my hand on his abdomen, I felt a pulsating swelling there. This aneurism shortly afterwards burst into the abdomen, and the man died. On examination of the body, it was found that the aneurism in the thigh, just below Poupart's ligament, had burst under the fascia lata; a great accumulation of blood took place, which pressed upon the vessel, and the femoral artery was obliterated. Sir W. Blizard had a patient at Walworth, with popliteal aneurism, which was cured spontaneously. Mr. Ford mentions several cases; and Doctor Baillie met with two cases of carotid aneurism, which cured themselves. Mr. Crampton, the surgeon-general at Dublin, has given an account of a case in which the aneurism gradually wasted in the abdomen, and obliterated the aorta.

An account of a similar case has been given by Baron Larrey, the French surgeon. An Irish gentleman, whose name does not at this moment occur to me, in passing through this metropolis, on his way to Paris, showed me a preparation from a case of spontaneous cure of aneurism, in which the aorta was obliterated at the loins.

As the spontaneous cure of this disease, however, cannot be so far depended upon, as to prevent us from performing the operation in all situations where the artery is accessible, I shall proceed to describe to you the mode of performing the operation in the different parts of the body, confining myself, in this evening's lecture, to the operation on the femoral artery. As we are occasionally under the necessity of performing the operation as it used to be done thirty-five or forty years ago,

I shall, in the first place, say a few words on the old operation. The operation for popliteal aneurism used to be performed in the following manner: A tourniquet was placed on the limb, and the patient laid on his face. An incision was then made in the ham, to the extent of the aneurism, and the adhesive matter and coagulated blood removed from the excavation thus made. The aneurismal bag was then wiped out with a sponge, and the tourniquet was slightly loosened, in order to mark the orifice of the artery. The surgeon stood ready with a probe in his hand, and as soon as he saw the blood issue from the upper orifice, he passed it into the artery, and then separating that portion of the artery from the remaining parts, put a ligature upon it. When he had done this, he again loosened the tourniquet, and as soon as he saw what appeared to be venous blood spring from the lower portion of the artery, (for the blood from the upper portion of the artery is florid, as arterial blood usually is, but in the lower portion it has the appearance of venous blood,) he introduced the probe into the orifice, and put a ligature upon the artery as before. An operation like this, which exposed a very considerable surface, where the artery in the vicinity of the aneurism was diseased, and by which the bones were frequently injured, from the ulcerative process taking place, necessarily led very frequently to fatal results; so frequently, indeed, that it was a disputed point among the profession whether it was better to amputate in cases of popliteal aneurism, or to perform this operation. A man who had recovered after the old operation for popliteal aneurism could, formerly, get money by showing himself at the hospitals; at present it would not be worth a man's while to beg in this way. It is to Mr. John Hunter that we are indebted for the great improvement which has taken place in this branch of surgery. But for Mr. John Hunter, we might still have had the same difficulties to encounter, and patients labouring under this disease might still have been exposed to the same danger.

Mr. Hunter being an excellent physiologist, and an admirable anatomist, applied the powers of his active and inquiring mind to this subject. He said, 'I have frequently

tied the femoral artery in animals, without injury; why should not I put a ligature on the artery, in the same way, in the human subject?'

It is right, however, to observe, that Mr. Hunter was led to this train of thought by having under his care a case of popliteal aneurism, of such extent as to have reached the tendon of the triceps, so that there was no room for the application of a ligature between the aneurismal sac and the tendon. He determined, therefore, to make the experiment of tying the femoral artery, rather than amputate the limb. The first operation was not, as might be expected, performed in the very best manner. He was not content with a single ligature, but applied several, which were left hanging out of the wound, and which were afterwards discharged by a process of ulceration. Yet under all these disadvantages, the patient recovered, and lived rather more than twelve months after the operation. On dissection, it was found that the femoral artery was obliterated as far as the arteria profunda. Since Mr. Hunter's time, several slight alterations have been made in the operation for popliteal aneurism, as every surgeon has his whim; but the principle established by Mr. Hunter remains the same, and that great surgeon has the undoubted merit of having substituted a simple and beautiful operation for one of very considerable difficulty and danger. I shall proceed to point out to you the several steps of the operation for tying the femoral artery in cases of popliteal aneurism. Mr. Hunter used to make the incision in the middle of the thigh, but experience has shown that it is better to make it one-third of the space downwards from the ilium to the internal condyle of the os femoris, because the artery is more deeply seated in the middle of the thigh than it is higher up; and there are, besides, many anastomosing vessels in the former situation. There are four steps in this operation: first, an incision through the skin, which lays bare the sartorius muscle; secondly, the division is to be continued along the inner edge of the sartorius, exposing the sheath of the femoral artery; thirdly, the incision through the sheath; and fourthly, the putting of the ligature round the vessel. I now make the incision, about four inches in length—[the learned professor

proceeded to perform the operation on the dead subject]—which completely exposes the sartorius muscle; I then separate its inner edge from the parts with which it is in contact; this lays bare the sheath, and I now find the femoral artery and the vein exposed. There is a little septum between the artery and the vein, which you should take care to observe. Introduce the aneurismal needle under the artery, taking care to disturb the parts as little as possible. Separate the cellular membrane to the extent of about an inch; and take care not to include the saphenus nerve, which is a small branch of the anterior crural nerve, in the ligature. If the saphenus nerve should be taken up, you will ascertain it by the irritability which is immediately excited. Having brought the ligature under the vessel with the aneurismal needle, all that remains is, to tie it with what is called a surgeon's knot, which does not slip. In this consists the whole operation. If you should have separated the artery from the sheath to any considerable extent, two ligatures will be necessary, which must be applied close to the part where the vessel is connected by the cellular tissue to the sheath; but if you should not have disturbed the artery, one ligature will be sufficient.

At the conclusion of the Lecture, Sir Astley, after wishing the class a merry Christmas and a happy New Year, stated that he should not lecture on the following Wednesday, (Christmas Eve,) nor on the Wednesday in the ensuing week; but that he should be in town on Monday next, and he would leave it to the class to decide whether he should give a lecture next Monday, or resume the course on Monday se'nnight. As soon as Sir Astley retired, Mr. Gillam, who as he afterwards informed the class, had been a pupil of this school, "*off and on*," for twenty-nine years, was voted into the chair. This gentleman was evidently not in the habit of addressing public assemblies; but as soon as he had succeeded in putting the question, whether the class should adjourn to Monday, or Monday se'nnight, it was carried by a large majority that they should adjourn to the latter period. An attempt was subsequently made to chair Mr. Gillam, for the ability which he had displayed in presiding on this occasion.

MEDICO CHIRURGICAL SOCIETY.

At a meeting of this Society, after the routine business was

concluded, an interesting paper on the Imperforate Anus, by Mr. Copeland Hutchinson, was read, in which the manner of performing the operation for the relief of this mal-conformation, and the subsequent treatment necessary to be observed, together with four cases in which Mr. H. performed it, were given at some length. Mr. H. says, that when the operation for imperforate anus is to be performed, the child should be placed on the table with the nates towards the operator, and the legs and thighs drawn up against the body, as is done in the lateral operation for stone; that the operator, before he begins, should titillate the part where the anus is usually situated, in order to produce a bearing down of the gut. Mr. H. goes on to describe the operation: the surgeon is to make an incision with a double-edged scalpel in the course of the raphe, about an inch and a half long, and as much in depth; the operator is then to put his finger to the bottom of the wound, and endeavour to feel (if he can) the cul de sac of the intestine; a middle-sized trocar, enclosed in a canula, is to be introduced into the wound, and carried upwards and backwards; the instrument is to be withdrawn, excepting the canula, which is to be kept in, to allow of an exit for the fæces; this must be secured by tapes in its proper situation, great care being taken, when the napkins are removed by the nurse, that it is not disturbed; after the canula has been kept in for a week, an elastic gum tube may be substituted for it; and, lastly, when the tube can be dispensed with, a sponge tent, or piece of bougie, is to be worn twelve out of the twenty-four hours, to prevent any contraction of the parts. The time at which the operation should be performed is from twenty-four to seventy-two hours after birth: even at a later period than this Mr. H. would not hesitate to perform it. It is desirable at the time of the operation, that the rectum should be distended with meconium, and for this purpose a little castor oil ought to be previously given. In female children, a catheter introduced into the vagina will be of some assistance to the operator. If the result of this operation should be unsuccessful, Mr H. states that he would immediately perform the other, if the friends of the child were agreeable, viz., cut down on the caput cœcum coli, and make an artificial anus in the right groin. This he has never yet had occasion to do.

A conversation took place on this paper, in the course of which Mr. Stanley stated that he had seen other operations for imperforate anus performed four times, all of which however had turned out unfavourably.

A paper by Dr. Bostock, on the connexion between the

senses of smell and taste, was also read.

GUY'S HOSPITAL.

JOHN F., aged twenty-five, from Henley-on-Thames, Oxon, was admitted here, Nov. 19th, under the care of Sir Astley Cooper.

He stated, that two years since, the 25th of last September, when loading a barge at Queenhithe Wharf, Thames-street, a cask of sugar fell from the crane and came in violent contact with his loins. The shock was so great that it occasioned insensibility for some hours; after having been bled, he recovered his mental faculties, together with his bodily strength, and was enabled to assist in working the barge to Henley, where he arrived in about a week after the accident. Suffered little from the injury during the voyage; but the day after his arrival, he was attacked by severe pain in the loins, and was likewise incapable of voiding his urine. He applied to Mr. Young, a surgeon at Henley, who, after some difficulty, succeeded in passing a catheter; he says, that its introduction was attended with very acute pain, and considerable bleeding—the retention continuing, he learnt the manner of using the instrument, and regularly introduced it himself, until the following April, when, becoming much worse, he went under the care of Mr. Brooks, of Henley. At this time he had violent pains about the lumbar vertebræ, and in the perinæum; his testicles painful, if pressed, but were not swollen; blisters were applied to the perinæum and loins; into the latter were also introduced issues and setons, and he was repeatedly cupped; all these means failed to procure relief, with the exception of cupping, and the benefit derived from this was but temporary. Continued under the care of Mr. Brooks until last April, at which time he applied to another surgeon at Henley. This gentleman, it appears, adopted similar methods to those previously employed, and with as little advantage.

From the time that he first applied to Mr. Brooks, to the present period (Dec. 1st), has suffered much from violent pricking sensations in his fingers and toes. Says that he is not more than half the size that he was before the accident occurred; is very weak, possessing scarcely any muscular power;—pain still severe in the loins, inclining to the right side;—bowels generally confined;—motions well charged with bile;—appetite defective;—body continues wasting;—his testicles (if ever he had any) have been absorbed, as scarcely a vestige of either remains—a small substance somewhat resembling the epididymis may still be felt, but the body of each testicle is quite gone. Spermatic chord perfectly natural; says that his testes were of ordinary magnitude previous to the ac-

cident, but from which time they have continued to diminish.

It is a curious circumstance, connected with this young man, that he has no beard. Indeed, there is no more appearance of hair upon his chin, than upon the face of an infant.

Dec. 3.—Has taken no medicine since his admission. Sir A. Cooper now ordered him the following:—

R. Pulv. Lyttæ gr. ½.
Terebinthinæ Chio gr. v.
Fiat pil.—ter in die sumend.

Dec. 8.—Considerable pain in the perinæum, and frequent desire to discharge the contents of the bladder; continues to introduce the catheter. This operation is now attended with a burning sensation in the urethra; ordered to take but two pills;—bowels confined;—pulse 110;—tongue clean;—incessant thirst.

Dec. 15.—Last night at eight o'clock, urine passed of its own accord, after the daily introduction of the catheter for two years and a quarter. For three or four hours before its discharge took place, he suffered much from very severe pain in the perinæum, loins, and across the abdomen. To-day is tolerably easy. but this morning was again obliged to use the catheter.

Dec. 17.—Has discontinued the use of the catheter. Now makes water in a perfectly natural manner. Pain in the loins still severe, but is much less in the perinæum. Pricking sensation of the fingers and toes no longer exists.

Dec. 21.—Very acute pain in the loins. Bowels confined. Less thirst. No appetite. Has not passed the catheter since the 17th. Continues to expel his urine as though in perfect health.

POPLITEAL ANEURISM.

Thomas M., aged forty, labourer, was admitted into Accident Ward, Aug. 29, 1823, under the care of Sir Astley Cooper, with popliteal aneurism of the right side, for which he was operated on by that surgeon the following day, Aug. 30th. At the time of his admission, the right leg, foot, and thigh, were extremely swollen; but of the natural appearance, except in the ham, where there was a discolouration of the skin, it being slightly black. Soon after the operation, the swelling of the leg and thigh went down, but the foot continued swollen till about three weeks after that time, when mortification of the (right) foot came on, which made considerable progress, and in ten weeks from the operation the foot was removed by Sir Astley just above the ancle; that is, the bones of the leg were merely sawed through, as they had been laid quite bare by the progress of the complaint, and since that period the limb has been gradually getting to its present state.

Condition of the limb.—The lower part of the tibia pro-

jects about three inches, and is quite uncovered; the fibula projects to the same extent, but the outer edge of this bone is laid bare two-thirds of the way up the leg, and may be easily moved. On the outer part of the leg, and extending a little way behind to the same extent, is a large wound which is covered by very healthy-looking granulations, from which proceeds a little purulent discharge; the inner and fore part of the leg are sound, excepting for about an inch and a half towards the lower part round the tibia, where there is a similar appearance to that on the outside of the limb; the edges of the wound are white. The limb itself is painful, but not so much as it was; it is placed in a flexed position on a pillow, resting on the outside; it is enveloped with some simple dressing spread on lint; round this some tow is put, and lastly the part of the pillow on which the limb rests is covered with oil silk; the clothes are kept from the limb by means of a fracture cradle. The applications are renewed once a day. There is a swelling in the ham, an inner part of the lower third of the thigh; it is, however, much smaller and less hard than it was.

General Health.—The patient is much reduced in size, being formerly stout; of a strong constitution, never in the habit of taking spirits, but used occasionally to drink freely of porter; countenance pale; pupils a little dilated; tongue of a bright red colour, moist; thirsty, particularly within the last fortnight; appetite very good; bowels open once a day; slight cough, and expectorates a little mucus; urine natural; pulse quick and full—120; can take a full inspiration without pain; respiration natural; no pain on pressure in any part of the abdomen; rest good; takes no medicine; is allowed a pint of porter, and about four ounces of animal food a day.

MIDDLESEX HOSPITAL.

Case of Cataract.

CHARLOTTE HILL, ætat. 46. This woman came here from Hertfordshire, with cataracts in both her eyes. She is quite blind in the right eye, upon which it has been determined to make trial of an operation. The cataract is of an irregular spotted gray or pearl colour.

Operation.—It was intended to have broken the anterior part of the capsule of the lens, and afterwards a part of its substance. For this purpose a small couching needle, curved towards the point, was used. The purpose of the operation was in some degree frustrated by the following circumstance. In passing the point of the needle between the cataract and the iris, with the intention of carrying the point through the pupil from behind forwards, it struck into the hard substance of the cataract, which was pushed forward by the

needle, and displaced. Without doing more violence to the organ than was consistent with its safety, the original intention of the operation could not be further prosecuted; the operator, therefore, satisfied himself with turning round the cataract in the capsule, and breaking its substance, upon which the needle was withdrawn. Pledgets of wetted lint to be kept constantly on the eyelids.

Dec. 18. The eye is slightly inflamed, and a spot of extravasated blood marks the conjunctiva. A shred either of the capsule or substance of the lens projects into the pupil, and time must be given, to see how far this body will be absorbed, before any further operation is performed.

Before the operation, the lens adhered to the capsule, and was steady in the motions of the eye;—it now vibrates in every motion of the eyelids, which is a proof sufficient of its present freedom from its former connexion. Six leeches were applied to the temple, for the purpose of subduing the inflammation; and afterwards pledgets of linen dipped in cold water.

Dec. 21. Much the same as before the operation. Sight somewhat perceptible.

MAGENDIE'S EXPERIMENTS ON THE BRAIN.

We call the attention of our readers to the following interesting papers, by M. Magendie, from the last number of his *Journal de Physiologie*, which has just reached this country.

On the Functions of the Corpora Striata and Corpora Quadrigemina. By M. Magendie.

It has been shown in my former researches that an animal from which the hemispheres of the brain are removed, sets off running with a degree of alertness, which it did not appear to possess before the experiment. In this rapid movement it sometimes passes over obstacles which are in the way; but it does not appear to see them: the sense of hearing, however, does not lose its acuteness. In studying these phenomena again, I observed that it is not the loss of the mass of the hemispheres which puts these animals in this state of irresistible motion, but merely the loss of the corpora striata.

If, indeed, you remove from a young rabbit the two hemispheres, together with the corpus callosum and anterior lobes, but at the same time avoid touching the corpora striata, the motion forwards is not manifested; the animal nearly maintains its usual paces, modified, indeed, in a very evident manner by the pain and bleeding. Its course is not changed even if the gray matter is taken away, which gives to the corpora striata the shade of a curved segment of a cone. I have several times removed this substance from the living

animal, so as to expose the white fibres which are seen radiating from the thalami optici, and spreading themselves over the hemispheres; and no apparent change has taken place in their movements. This fact is of importance, as relates to the assertion of certain persons, who attribute the origin of motion to the gray substance, whilst the white is by them regarded as the origin of sensation—an assertion which has moreover been proved to be incorrect, by the researches in comparative anatomy of M. Desmoulins.

The circumstance, however, which does not take place on the removal of the gray substance, never fails to happen when the white is taken away: the instant you begin to touch this last, the animal shows signs of uneasiness, and endeavours to make its escape; the removal, however, of one of the two corpora striata leaves it still master of its movements; it proceeds in different directions, and stops whenever it chooses; but as soon as the two corpora striata are separated by a vertical section from the thalamus opticus, the animal rushes forwards, and sets off as if pushed by an irresistible power.

This phenomenon happened before me, without my knowing the cause, in a case which deserves to be related.

In the course that I have given this winter on the action of medicinal substances, I placed into the ventricles* of the brain a few grains of emetic powder, and by accident the substance came more particularly in contact with the corpora striata. After the emetic tartar had been there about a quarter of an hour, all the assistants and myself were not a little surprised to see the animals spring forward, and run with wonderful alertness. It is impossible to say how many conjectures occurred to our minds without hitting on the right one; but on repeating this experiment, and seeing that the corpora striata were a little destroyed by the chemical action of the emetic, I discovered the real cause of the phenomenon.

Thus the soundness of the corpora striata in their white part is connected with the direction of motion and volition.

I have mentioned in the paper quoted above, that the removal of the thalami optici causes greater disturbance than the taking away the corpora striata does, for the animals lose all movement forwards, and even the power of standing; and these affections, already very serious, were increased by the removal of the corpora quadrigemina. Some recent experiments give me an

* The greater part of my experiments have been directed, this year, to the effects which result from the direct application of medicinal substances to different parts of the brain. The results at which I have arrived have been recorded by several persons who attended my course: I shall publish them without delay.

opportunity at present of modifying this result.

It is very true that in making a vertical section behind the thalami optici, of about the thickness of the medullary matter, the effects that have been stated are produced; it is certain also that by cutting in the same way behind the corpora quadrigemina, the limbs previously separated approach and cross each other: but these different phenomena only occur when the bed of medullary matter covering the face of the cranium is touched. If the section is limited, so as to touch but half of the thickness of the medulla oblongata, the effects above stated are not developed. I have seen rabbits from which I had removed the gray matter of the corpora striata, the superior half of the optic beds, and the four corpora quadrigemina, run about and direct their motions as they please. But I had not interfered with the white fibrous substance, which radiated from the corpora pyramidalia to the hemispheres. It would appear that it is particularly in this part of the brain that the properties relative to motion reside. I believe moreover I have proved that the sensibility is less acute in that part than in the medullary matter which is placed above it; and that the distinction of the two properties which is apparent in the spinal marrow, would also remain in the medulla oblongata.

I have performed experiments which appear to throw some light on the functions of the corpora quadrigemina, particularly the anterior.

I have shewn for a long time past in my lectures on experimental physiology that a wound of the anterior corpora quadrigemina in birds produces loss of vision. I make the experiment in a very simple way: with the point of a large pin I succeeded in wounding, through the parietes of the skull, the corpora quadrigemina in the cavity at the base of the cranium which they occupy. The wound of one of the bodies impairs the vision, but I have never been able satisfactorily to determine if an injury of one side affect the opposite one; that is, if a wound of the right corpus quadrigeminum produces the loss of the left or right eye.

In order to ascertain it, Mons. M. has injured the eye of a bird, and twenty or thirty hours afterwards has found that the injury had affected not only the nerve of the eye on which the experiment had been tried, but the corpus quadrigeminum of the opposite side; this Mr. M. has frequently observed; but in mammiferous animals and man the effects of the injury seldom or ever extended beyond the nerve of the eye on which the experiment had been performed.

***History of a Case of Hydrophobia, treated at the Hotel Dieu at Paris, by an injection of Water into the Veins. By* R. MAGENDIE. *October*, 1823.**

ON the 15th of this month, I

was invited by R. Caillard, the resident physician at the Hotel Dieu, to go immediately to that Hospital, to give my opinion on the case of a man who had just arrived, in the last stage of hydrophobia. I went at one o'clock. Several pupils of the Hospital, whom I met, told me that there was not a moment to lose, if I wished to see the patient alive. When I arrived, I found the patient placed in an isolated room, restrained by a strait-waistcoat, and agitated by the most furious transports. On approaching his bed, I found that he exhibited all the symptoms of hydrophobic mania; the eye menacing, but not injected; the most violent cries and efforts * to get rid of the straps which held him down; alteration of the voice, thickened saliva, biting at the substances which were presented to his mouth, and at intervals a return to a tranquil state. At these intervals, which lasted a very short time, he understood the reasons and the consolations which were addressed to him; but he soon relapsed into a state of fury. The sight of a looking-glass, or of any liquid, excited the most violent agitation. In the morning he had swallowed a few drops of liquid; but when I saw him, a spoonful of water which was poured within his lips produced dreadful convulsions in the muscles of the pharynx, and he spat it out violently upon the assistants. The slightest noise, even the mere contact of the fingers with his hair, produced convulsions of incredible violence. His body bent and unbent itself alternately with an energy which it was difficult to account for. His pulse beat more than 150 strokes in a minute, and his respiration was interrupted. From all these symptoms, there could be no doubt as to the existence of hydrophobia. It was evident that the patient was on the point of death.

I inquired whether the man had been bitten, and was told that his relations knew nothing about such a circumstance. It appeared that the patient had been in low spirits for some time, because he had not strength enough to continue his business as a journeyman baker; that his melancholy had increased since the receipt of a letter from a woman to whom he was passionately attached; that two weeks before he had tried to drown his cares by excessive drinking, which lasted several days, and that the consequence of his excess was a copious bleeding from the nose, for which he consulted a physician, who considered his case to be a congestion of the brain, and ordered thirty leeches to be applied, after having bled him from the arm three times. Notwithstanding this treatment, the patient was seized with several paroxysms of fury, in which he threatened all who

* In these attempts he had torn with his teeth a part of the strait-waistcoat which he was able to reach.

were near him, and swallowed liquids with difficulty. His relations finding that his disorder increased, and not being able to restrain him, brought him to the Hotel Dieu in the night. I learnt also that the patient had been copiously bled in the foot at the hospital that morning, without any abatement of the paroxysms, which followed each other more rapidly, and increased greatly in violence.

The greater part of this information coincided with the existence of hydrophobia. I requested a dog to be brought, in order to inoculate it with the saliva of the patient, and repeat an experiment which I had formerly made at the Hotel Dieu, in concert with M. Breschet *.

In the mean time the case was of the most urgent nature, and it was evident to all present that the patient would very soon sink under the violence of the disease. Already a cold sweat covered his head and breast, and his pulse could scarcely be counted. It became necessary, therefore, to take decided measures.

I recollected the results of the experiments which I have recorded in the first volume of this Journal, and in which I had seen the phenomena of hydrophobia cease in dogs by the injection of warm water into the veins; I determined, therefore, to try this extreme measure †.

A small syringe for hydrocele, in a very indifferent condition, was brought to me; some water was heated to 30 degrees (Reaumur); I ordered the right arm of the patient to be seized, and I exposed it by making an incision in the sleeve of the strait-waistcoat. I was immediately struck by several little wounds which appeared on the index, and a much larger sized scar on the second bone of the metacarpus, which appeared to be the effect of a recent application of the cautery. The patient was not in a state to answer any question; and his friends not having been able to give me any information on this subject, I proceeded to open a vein in the fore-arm. This operation, generally so simple, was in this case rendered somewhat difficult in consequence of the continual motion of the patient. However, five or six strong pupils having seized his arm, I succeeded in passing two threads under the vein, and made an opening in it which enabled me to introduce the mouth of the syringe. It was a quarter past one o'clock when I began to inject into the vein the quan-

* The inoculation did not take place, as we could not procure a sufficient quantity of saliva from the patient to perform it.

† If the case had not been of so pressing a nature, I should have considered it my duty to consult my learned brethren at the Hotel Dieu; and I should have confined myself to merely proposing the measure, which, under the circumstances, I felt it necessary to resort to immediately.

tity of two pounds of water, at 30 degrees Reaumur, having replenished the syringe nine times.

Every time I injected a syringeful of water, I examined the patient, to see whether it had produced any effect which might induce me to suspend the injection; but there was no particular change: he continued to vociferate, and to talk of his inevitable dissolution, &c.; I only stopped because I conceived that I had injected enough to produce a sensible effect. The injection was concluded at 40 minutes past one. I secured the vein above and below the wound. Already an unexpected degree of tranquillity was observed in the patient; his pulse was sensibly diminishing; it fell from 150 to 120, soon after to 100, and twenty minutes had scarcely elapsed before it fell to 80. At this time we observed a phenomenon which no one had ventured to hope for: all the acute and violent symptoms disappeared with a promptitude which astonished all who witnessed it; I felt at this moment the highest satisfaction that I have ever experienced.

The patient regained the use of his reason; his fury was succeeded by perfect tranquillity; his eyes recovered their natural expression; the convulsive motions ceased; and, what is most extraordinary, he was able to drink, without any difficulty, a glass of water which was presented to him; in short, the state of the patient had undergone a complete change. Soon after, Caillard caused the strait-waistcoat to be removed from the patient, who immediately asked permission to get up and go down into the court to make water. It was thought for some time that the request was the effect of some remains of delirium; but he repeated it so often, and in so pressing a manner, that M. Caillard at length consented to it, and was astonished to see the patient, supported by the pupils, walk calmly towards the door. When it was found that he really wanted to make water, he was told that he had better do so in a corner of the room. A few minutes after, he passed about a pint of turbid urine, of a deep yellow colour, and so extremely fetid, that it was necessary to carry it away immediately from the room.

At this time, which was an hour and a half after the injection, the patient asked for his relations; saw them; conversed with them on his affairs, and resumed his courage and his hope.

The physical state of the patient at this time was very remarkable, and resembled nothing I have ever witnessed.—He had no fever; his pulse scarcely exceeded 80; but all the functions which support life, the contractions of the heart, respiration, &c. were performed with a quick tremor. If we touched any muscle, we felt it agitated by

the same tremor; in short, the morbid phenomena in this patient were as singular as the novelty of his condition.

In the evening of the 17th, he received the succours of religion. In the night he had hæmorrhage of the large intestines; the blood came out in clots of nearly a cubic inch, and had the appearance of arterial blood; it was mixed with portions of well formed fecal matter. A little pain in the abdomen followed this accident, but it was calmed by emollient clysters and fomentations.

The patient was able to take some chicken broth. He continued to get better without interruption till the fifth day; on that day he complained of acute pains in the wrists, knees, and elbows. The left knee especially was swelled, and the elbow and wrist on the same side. Besides these inflammatory accidents, which had evidently no connexion with the original disease, and probably rose with the method of treatment, the patient laboured under another complaint. On the morning that he was brought to the Hotel Dieu, M. Caillard judged it necessary to bleed him copiously in the foot. The bleeding was performed during the most violent state of the symptoms, and the motions of the patient had caused the points of two lancets to be broken in the inner side of the tibia. These extraneous bodies had excited a violent inflammation of the foot and of the posterior part of the leg, and there was every reason to believe that a large abscess had formed in this part.

These different local accidents continued to threaten the life of the patient; in addition to these, involuntary vomiting of green matter supervened, the abdomen was painful to the touch towards the cœcum, and fever began to appear. Some person said incautiously before the patient that he had been bitten by a mad dog, and that an experiment had been made upon him. From that time his mind became sensibly affected; he despaired of obtaining a cure, and was constantly in apprehension that some person was coming to smother him. At length, on the eighth day after the injection, no hope of a cure remained, and he died early on the ninth day. There was nothing particular in the manner of his death; he was sensible that his death was approaching, and he dozed a little before his dissolution.

The body was opened in the presence of a great number of practitioners and students.

Our attention was first directed to the local accidents which had evidently caused the death of the patient; we expected to find a large abscess in the posterior part of the right leg; and we did in fact find one occupying the space between the projection of the calf and the heel.

We then examined the swell-

ed joints which had occasioned such severe pain to the patient, namely, the knee, the elbow, and the wrist of the left side. We found all these joints filled with pus, and their synovial membrane in a state of violent inflammation. The cartilages, as it often happens, did not participate in this inflammation.

We did not expect to find any severe lesion of the intestinal canal: there was no remarkable appearances in this part; nevertheless the hæmorrhage by the anus, the pain felt by the patient, which obliged us to have recourse to emollients, showed that the digestive organs were not in a sound state, and accordingly we found the mucous membrane at the end of the small intestines red by the injection and expansion of its veins. This redness, though less strongly marked, reached as high as the jejunum. At the junction of the ileum with the cæcum there were a dozen little superficial and recent ulcerations. The largest were a quarter of an inch in length, and one-sixth in breadth; and the corresponding mesenteric glands were but little swelled, without any alteration of their structure, a circumstance which proves that they were very recent. There was nothing remarkable in the large intestines, from which the hæmorrhage had certainly proceeded. The pharynx, œsophagus, and stomach, presented nothing worthy of observation.

But a general phenomenon, which was very remarkable, was the decided state of putrefaction in which we found the blood. This fluid was everywhere liquid, and had furnished a great quantity of gas, which filled and distended the heart and large vessels, and had produced sub-peritoneal emphysema of the stomach and intestines. The lungs were sound, though a little swelled in their posterior part; the last bronchial divisions were red, but the trachea was sound *.

Nothing particular was observed in the nervous system. Some reddish serum was seen at the base of the cranium, and in the vertebral canal. The veins of the brain and of the rachidian prolongation were filled with red liquid blood. The ganglions of the great sympathetic were in a natural state. The little wounds and scar of the hand were also examined with the greatest care, and all the medical gentlemen present were struck with the resemblance of these wounds to bites, and of the scar to the effects of the recent application of the cautery.

* The rapid putrefaction of the blood, and the considerable development of gas in the vessels and heart, are almost always observed in the bodies of individuals and animals that have died of hydrophobia. In hot weather this appearance is very striking an hour after death. In this point of view, the excessively fœtid state of the urine passed by the patient after the injection, is worthy of observation.

It results from the history of this case, that a disease, which exhibited all the characters of hydrophobia, ceased by the introduction of a pint * of warm water into the veins; that the patient survived this introduction eight days; that no accident appeared to follow from it; and that the death of the patient appears to have been caused by a local disease, which was wholly unconnected with the hydrophobia and the new mode of treatment.

The hope of succeeding in a means of curing hydrophobia by the injecting of warm water into the veins, already founded on some experiments made upon animals, acquires, therefore, a fresh degree of probability. It is even possible, as some of my learned brethren of the Hotel Dieu think, that the same means may become a resource in certain extreme cases, in which the ordinary medical treatment is unavailing.

With a view of enabling practitioners of all countries to make experiments themselves, I shall publish, in the next number, what experience has taught me with respect to the advantages or injurious effects of the injection of warm water into the circulating system.

Clinical Lecture on Syphilitic Iritis, at St. Thomas's Hospital, Dec. 30th, 1823. DELIVERED BY MR. TRAVERS.

I MEAN, gentlemen, to call your attention to-day to a case of iritis, which was lately in Jacob's ward of this Hospital; the man had been the subject of gonorrhœa one year previous to his admission; he was servant in a respectable family which I had attended some years ago; and the case being very severe, he was sent to me by his master, in order to have my opinion on it; the surgeon under whose care he had been was formerly a pupil here; he had bled and purged the man, and commenced giving him mercury, so as to affect his system. On examining the patient, I immediately found what usually occurs in syphilitic iritis: the man was nearly blind, the inflammation only of a few days' standing, and there was considerable vascularity of the conjunctiva; but the circumstances which marked the ophthalmia were the great difference of the circle of the pupil from the natural state, flakes of brown matter round its margin, opaque and adhering to the upper part. I sent him to the Hospital, ordered him to be cupped immediately, and take some house physic (infusion of senna and sulphate of magnesia,) and after this to have 2 grains of calomel and a quarter of a grain of opium, every four hours, till ptyalism came on; at the same time he was to cover the brow of that side thickly over with extract of belladonna, and, in fact, to put some all round the orbit three times a day; this may easily be done by rendering the

* The pint of Paris contains 48 cubic inches.—ED.

belladonna of the consistence of cream by the addition of a little water to it; in 36 hours he began to taste the mercury; on the 24th (he having been admitted on the 20th of October) the report states that the inflammation was much less, and on the 25th that there was a marked change in the masses of lymph; to-day his mouth was so much affected with the mercury, that he was ordered to take it every 6 hours, and 2 days after, only every 8 hours. On the 27th his bowels were constipated, (a fortunate circumstance, when it is necessary for so much mercury to be given,) and some house medicine was ordered him; by this time the inflammation of the conjunctiva had subsided, the pupil became enlarged, the masses of lymph sensibly diminished, and from almost a state of blindness, he was restored to vision, and could distinguish objects well; on the 30th of November, the report states that the masses of lymph were diminished, the power of vision increased, and the calomel discontinued; on the 7th of December he was ordered to take the decoction, together with the extract of sarsaparilla, three times a day, the deposition of lymph being removed, and vision good; on the 20th December he was discharged quite well in two months from the first admission, the cure of the eye, however, having been effected in a little better than a month.

Now, gentlemen, when this man called on me, I taxed him with having had some sore on the genitals, or a running within the last twelve months, which he strictly denied, but feeling as morally certain of it as of any thing in the world, I repeated to him the statement, and my conviction of its truth, and then he allowed that he had been the subject of gonorrhœa, and as I believe he stated, that he also had a small excoriation on the glans, which got well. The man, in answer to repeated inquiries, told me that he never had taken any mercury for a syphilitic affection; but though all such assertions are to be received with caution I am disposed to believe him, because the iritis was not accompanied with any secondary symptoms of syphilis, he had neither pains in the bones, nor spots on the skin, no sign indeed of having been subjected to a mercurial treatment. In such a case as this, I think, all collateral proof should be received; he had been for several years a footman or valet to a respectable family, and able all along satisfactorily to discharge his duty. Well, then, in this point of view, the case is one of considerable value; it is also of great value with many others, which might be adduced, that the remedy employed had the desired effect of restoring the organ to a healthy state, when it was on the very verge of being destroyed; but the case is especially of value, as it throws much light on s

disputed question, viz., *whether there be any such complaint as syphilitic inflammation of the iris*, for the difficulty in deciding this point arises in consequence of almost every person who becomes the subject of iritis after syphilis having been equally subjected to the action of mercury. I never saw a man who had undergone a course of mercury for a diseased liver, attacked with iritis resembling this; and how many do we find who are put under the action of mercury, in these days, for other diseases, during weeks and even months, yet one would suppose that the mercury, either by its own specific property, or by predisposing a patient to cold, if the iritis were the consequence of the mercury, could scarcely fail to produce that complaint; but I never saw an instance of the kind. I have seen common inflammation of the eye converted into iritis, where the patient, at the time he has had it, has been put under a course of mercury for a sore on his yard, yet this differs essentially from the first. In an essay which I have written on this subject, I have attempted to describe the difference; but descriptions of appearances, even where they are illustrated by graphic representations, are attended with difficulty; there are numberless appearances on such an organ as the eye, which it would be impossible to describe so as to convey our meaning. I have got into discredit sometimes with patients, who have come to me with this form of disease, for telling them directly, without inquiring further, that within twelve months they have had a running or some syphilitic affection: and I will venture to say, if this complaint were shown to me, that I should either ascertain that the patient had been the subject of syphilis, or prove that he was not worthy of credit. I have not met with a single exception, but have seen repeated proofs in confirmation of it.

In the common inflammation of the iris, the conjunctiva is more inflamed, the cornea will be found more obscure, so as to prevent the iris from being distinctly seen; the aqueous humour is loaded and turbid, the sensibility to light is greater, the lymph thrown out of a white and purulent character, and the pain does not come on periodically, as in syphilitic iritis; besides these symptoms, I have thought that the colour of the blood-vessels is different, being pink, but in the syphilitic iritis they are darker, being of a reddish-brown or brick-dust appearance; also, the pupil does not contract so irregularly, and there is a difference in the lymph; if solid, it is not tuberculated, it assumes the appearance of membranes like layers coating the posterior part of the cornea, and attached by broad adhesions to the

anterior surface of the crystalline lens.

In syphilitic iritis, the intolerance of light is less, the inflammation of the conjunctiva less diffused, the straight vessels of the sclerotic forming a zone round the cornea; the pupil does not regularly contract; there is frequently lymph in the anterior chamber, of a brown colour, and vision is dull. In syphilitic iritis also the man is seized with severe pains at night, sometimes one or two paroxysms, and about four o'clock in the morning; the pain extends also back to the occiput: now when such an assemblage of symptoms as these are observed, one is enabled to say, whether it is strumous ophthalmia, or that which follows syphilis; there is no one symptom in any complaint which will enable you to form a diagnosis, but it is from an assemblage of symptoms. The most important part in the case which has given rise to these observations, is the having discovered the character and origin of the diseaes; it would involve us in a long discussion on a difficult subject, were we to say that the man had not been afflicted with syphilis, but merely gonorrhœa. (Here the learned gentleman spoke in so low a tone that we were scarcely able to catch his observations.) The question is too difficult, and I have only to say, that it is so unsettled and unsatisfactory, that we are reduced to empiricism, for want of an accurate classification, every one being obliged to trust to his own experience in the treatment of persons with this complaint; we must, however, hope for better things.

The treatment of iritis depends on the rapid introduction of mercury into the system, after relieving the vessels of the organ; for this last purpose leeches are inadequate; arteriotomy is not so good, if the temporal artery be divided, you call into action the collateral arteries; and cupping acts in a very salutary mode in these complaints, and may be done with great expertness, and decided benefit: whether mercury be introduced by means of friction over the brow, or calomel or blue pill, is a secondary consideration; you must begin, however, by relieving the vessels of the eye, else destruction of sight will be the consequence; as a substitute for mercury it will not do to give what is termed a syphilitic drug, as is done in some affections of the skin; you must give mercury, else the capsule of the lens will become opaque, or what is worse, the retina affected, and then amaurosis of the organ will be the consequence.

MEDICAL REVIEW.

A Statement of the early Symptoms which lead to the Disease termed

Water in the Brain, with Observations on the Necessity of a watchful Attention to them, and on the fatal Consequences of their Neglect. By G. D. Yeats, M.D., F.R.S., &c. &c. Second Edition, 8vo., pp. 164. W. Philips, London, 1823.

The work before us appeared a few years ago in the form of a letter to Dr. Wall, but another edition being called for, our author has considerably enlarged it, and published it in a different shape from the first. The subject principally treated of is not hydrocephalus*, or, as he terms it, hydrencephalus, but the symptoms which precede that complaint, and the cause on which, in the majority of cases, they mainly depend.

After making some preliminary remarks, in which the advantages to be derived from prompt medical treatment, in incipient affections of the brain, are particularly dwelt on, as well as the connexion between those affections and derangement of the intestinal canal, our author comes to the consideration of the time when water in the brain most frequently comes on, which he states to be from two to fifteen years, but also says there are two periods within that age, during which circumstances occur that sometimes run into severe disease, and act as exciting causes, if not obviated, in producing that state of the brain which ends in effusion of fluid.

"The circumstances to which I allude," says Dr. Yeats, "are teething, and, in females, about the age of fourteen or fifteen, the efforts of the constitution to develop the circulation in the production of the monthly discharge. At both these times the constitution is extremely irritable, and the nervous system tremblingly alive to impression. In both instances, if the circulation be not properly managed, with a due attention to the increased sensibility of the nerves, the head too often suffers from the excitement of its vessels into inflammation, with all its serious inconveniences, as I have frequently witnessed." P. 5.

We are rather surprised that he should have altogether omitted to mention here the evil effects which are very often produced at the time of weaning, from the injudicious management of children, by their nurses or mothers, who frequently cram them with a variety of sweets and other things, which disorder the stomach, and give rise, in many cases, to the affections of the head alluded to above; repeated instances of this kind must have come before the notice of every medical practitioner who has seen any thing of diseases of children; the omission of this circumstance on the part of our author is the more cul-

* Hydrocephalus, from ὕδωρ and κεφαλή, signifies water in the head; Hydrencephalus, from ὕδωρ and ἐγκέφαλος, water in the brain.

pable, as the "cautions and admonitions" contained in his work are intended for the perusal of parents as well as professional men.

We pass over the description given of the process of digestion and the functions of the intestines, as it contains nothing new, with the exception that great importance is attached to the office of the duodenum*, which he considers to be an organ fully as important, if not more so than the stomach; and come to the next part of our author's subject, the symptoms which precede the formation of water on the brain. "In the very commencement of the symptoms," says Dr. Y., "before any alarm is taken, and before any person can possibly imagine, but from experience, that they will often terminate in water in the brain, an occasional languor, as if arising from fatigue, with intervals of considerable activity, is observed; the usual degree of healthy appearance of the countenance diminishes, though not permanently, in a transient paleness and occasional collapse of the features; a dark coloured line is observable under each eye, with a dulness of that organ, the usual softness and pliability of the skin diminish, with a consequent harshness and increased heat on the surface; the appetite capricious; occasional thirst; state of the bowels more than commonly tardy; the tongue white, and rather disposed to be dry if examined in the morning; a cough attends at times, and is often very teasing; and the pulse at this period exhibits no particular morbid change, either in its frequency, strength, or regularity; the urine is at times higher coloured than it ought to be, and from observing that the child has not had an evacuation by the bowels as often as usual, recourse is had to some domestic purgative, and a stool is procured more than commonly consistent and firm, and not in the same quantity as formerly with the same dose of the medicine; no very striking alteration of colour is observable unless attentively examined, when it will plainly appear that a diseased secretion has already begun to take place in those glands which pour their secretions into the intestinal canal.

"When any uneasiness in the head is complained of, it is not of pain either acute or dull, but of a disagreeable noise and confusion, with some giddiness, and there is a painful sensibility of the eyes; the scalp, at times, feels sore on being rubbed or touched, and sometimes there is a stiff neck.

"During this state, upon examination, a puffiness will be felt, and also a fulness observ-

* Dr. Yeats's view of this subject will be found more at length in the Medical Transactions of the London College of Physicians, Vol. VI. p. 325.

able over the centre of the stomach, extending towards the navel; uneasiness is complained of there from pressure, but like all other symptoms at this time, they are not permanent; and the only symptom which observes any permanency, is the torpid state of the bowels, although the degree of it varies in different patients; the costiveness is, nevertheless, always more or less present; the sleep is frequently disturbed by restlessness, indicated by repeated movements about the bed." P. 39.

The continuance of these symptoms, before they assume a more formidable appearance, will vary according to circumstances. In some cases, where the constitution is bad, and parents are inattentive to the diet they give their children, they rapidly become worse; in others, where the constitution is sound, and attention is paid to the food children take and the state of the secretions, the symptoms above described seldom fail to disappear. The treatment recommended by our author consists in the exhibition of purgatives, combined with alteratives.—Speaking of the treatment of this train of symptoms, Dr. Yeats says—"A combination of the evacuants required will occur to every practitioner, with the proper intervals of their exhibition, according to the age of the patient, and the degree of obstinacy in the constipation. I have commonly given the compound extract of colocynth with calomel, or the pil. hydrarg., or the latter with aloes, rhubarb, or scammony, twice or thrice, or even four times, in twenty-four hours, in moderate doses, so as to keep the abdominal viscera gradually excited." P. 51.

Every one who has paid the least attention to the effect of remedies on different persons, must be aware that the purgatives which our author states he has commonly employed, would, if given to some persons, rather aggravate than remove the complaint which they were intended to relieve.

Dr. Yeats objects to calomel being administered without some other purgative at the same time. "The intestines are generally very torpid after the operation of a dose of calomel, and will often continue so under its use, until it accumulates in the bowels, and even then it frequently does not act, for this reason it is, that in the digestive derangement which takes place in children, preceding the attack of the head, I have always found it necessary, and made it an established rule of practice, to join other purgative ingredients, with the calomel, to obviate this state of the duodenum in particular, and thus to prevent the bile and its other contents from remaining too long in its cavity." P. 61.

In those cases where the drastic purges above-mention-

ed do not answer their object, a little cold drawn castor-oil will be often found of very great service. We now come to the next stage, when the symptoms, instead of being relieved, assume a more serious shape.

"The occasional languor wears more the appearance of permanent lassitude; the returns of activity diminish; the child wishes to be almost constantly in a recumbent posture; the unhealthy look of the countenance becomes more permanent, and more observable in every respect;- the darkness under the eyes is of a deeper colour; the excitement from feverish action becomes more regular and more apparent, with the consequent harshness of the skin: occasional flushes pass across the cheeks, sometimes more fixed in one cheek; the hearing becomes more acute, the child starting at slight noises; transient pains are felt in the head, more or less acute, and more or less frequent. The pulse now becomes at times much quickened, and it will change its state of frequency on the least movement." P. 68.

In addition to these symptoms, the patient becomes drowsy; the bowels more costive: and the stools when procured are of an offensive smell and unhealthy appearance. Sickness and vomiting supervene on the least motion, and giddiness with dulness of sight is frequently complained of; even in this stage Dr. Y. thinks the case remediable. The treatment must be proportioned to the violence of the symptoms.

"From the feel and condition of the pulse, and from the increased febrile accessions and pain, an inflammatory tension has evidently taken place in the circulating system, requiring the loss of blood; but whether it is to be done locally by leeches, or generally by the lancet, or by both, must depend upon the urgency of the symptoms, the age and constitution of the patient, according to the discretionary judgment of the physician." P. 76.

The application of blisters in this stage is not warmly recommended by our author; strict attention must be paid to the diet, and the bowels kept open. During the recovery of the patient a tonic combined with a mild purgative will be of service.

The third train of symptoms is marked with greatly increased violence, and with great suffering to the patient. Besides those that were present in the second stage,—

"A dewy moisture settles in drops upon the upper lip and round the nose; a considerable wasting of the flesh has taken place, the countenance pallid and sunk, with accession of transient crimson flushes playing about the cheeks; a hollowness of the temples; blueness of the lips, with their frequent retraction,

from an attempt but inability to cry, ending in a whining tone from weakness; the eyelids half open, and motionless; the eyes filmy and fixed, with a peculiar stare, from the extreme dilatation of the pupils; the circulation is extremely hurried; convulsions frequently take place; palsy supervenes, either partially or generally; if the former, the child is constantly sawing backwards and forwards across the body with the arm of the opposite side, and death, most commonly in one convulsive struggle, closes the painful scene." P. 91.

The only chance for the patient's life, in this stage of the complaint, will depend on the speedy use of active measures, such as local and general blood-letting, stimulant applications to the legs, and the application of cold to the head, together with enemata to unload the bowels. Dr. Yeats does not think the life of the child to be despaired of, if effusion has taken place into the brain. Two or more cases are given, after each train of symptoms.

In the list of remedies recommended, no mention is made either of the warm bath or Ipecacuanha; we have seen, however, great relief afforded by the former in removing that roughness of skin described in the first and second train of symptoms, by opening the pores and producing a gentle perspiration over the surface of the body; and the second remedy, Ipecacuanha, will, of itself, relieve all the first train of symptoms, when they arise from offensive ingesta (as is very often the case) being taken into the stomach, more effectually than any other means.

The principal feature of the work before us is the view that is taken of the connexion between affections of the brain and a disorderd state of the stomach and bowels; this is not a novel one; but from the frequently fatal termination of symptoms at first only slight, Dr. Yeats has directed his attention to those affections in an earlier stage than has been done by the generality of writers on the subject; he has described the symptoms which precede one of the most serious complaints that can befal a patient, and though symptoms similar to those detailed in the first stage, may, and often do, exist without assuming a more serious aspect, yet the principle, *obsta principiis*, is safe and judicious; the symptoms are described with accuracy, but the cases illustrative of the different trains of symptoms are not given with that minuteness which, in our opinion, would make them valuable, nor is there that precision in the treatment recommended which we could have wished for; there is also great vagueness every now and then in the language made use of by our author, which must always tend to retard rather

than advance the progress of knowledge. We cannot quit the work without stating that, to the professional reader, the notes, which are added in the form of a Postscript, will not be found the least instructive part of the volume, as they contain references, with the exception of some of the modern continental writers, to nearly all who have written on the subject.

ST. THOMAS'S HOSPITAL.

Case of Chronic Hydrocephalus.

THE following is an extremely curious case. We have used the Latin language on this occasion, because some of the details of this case are of a nature which, though interesting in a physiological point of view, might perhaps be objected to by fastidious readers.

J. Cardinal, annos viginti novem natus, in hoc Nosocomium, admissus est mense Aprilis, anno 1822, hydrocephalo chronico affectus. Mater ejus dixit, caput filii sui die natali majusculum esse quam in infantibus commune sit, idque paulatim increvisse, donec annum ætatis quintum attigerat, quo tempore, caput ejus talis erat magnitudinis qualem hodiè inspicere licet. Corporis exigui est ægrotans; statura quinque pedum, et quinque pollicum; facies macilenta, oculi subfusci, vox acuta, membra extenuata, sed nulla, ut videtur, organorum deficientia. Caput ejus magnitudinis mirabilis est; circumferentiâ 33½ pollicum; spatio ad extrema utriusque auris 20½ pollicum; a tuberositate occipitis ad radicem, nasi emetitum 21½ pollicum: Summi capitis depressio est quam notatissima; os frontis satis prominens; tuberositas occipitis projecta. Circa duos pollices supra tuberositatem cranium valde projectum. Intra quinque fere proximos annos convulsionibus epilepticis laboravit, quibus maxime affligi solet, ubi animus aliquo modo irritatur.—Convulsiones quoque fere mense recurrunt; signa paroxysmum præcedentia sunt torpor posterioris partis capitis prope os parietale dextrum, dolorque acutissimus in regione occipitis. Digestio haud mala; alvus vero aliquando torpidus, iisque temporibus recurrit epilepsis. Non potest plusquam pauca spatia ambulando conficere, quoniam caput ejus enorme cito vertigine corripitur. Appetentia cibi naturalis est; interdum quoque stomachum geniali cerevisiæ haustu reficit. Capilli capitis rigidi, nulla barbæ signa; ipse vero affirmat sibi ter quaterve anno opus esse tonsoris auxilio. Congressum venereum nunquam inivit; erectiones vero habet naturales, coitusque voluptates vehementissime desiderat; interdum poscit, efflagitat. Prorsus singularis est hujus hominis status physicus, quum de his

rebus interrogatur. Color certus in genas alioqui pallidas ruit; oculi micant, os semi hiulcum cachinno distenditur, totumque corpus nescio qua perturbatione agitari videtur. Nescit an semen unquam noctibus emiserit; bene dormit, salusque generalis, ut dicitur, minime prava. Nonnunquam lectione animum recreat, nec ars scribendi ei prorsus ignota; quæ legere solet haud equidem memoria tenet, sed libris religiosis maxime gaudet. Satis sorte contentus videtur dicitque se nunquam velle e nosocomio egredi

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Wound of the Scalp and Fracture of the Os Humeri.

Oct. 25.—Half-past 8, *a. m.*—Edmund E—, aged 42, waggon-driver, Merrywith, Kent, was *admitted* into St. Thomas's Hospital (Luke's ward), under the care of Mr. Tyrrell, at three o'clock this morning, with a wound of the head and a fracture of the right os humeri; says, that yesterday morning (October 24th), at nine o'clock, whilst driving the waggon, he was thrown from the seat-board on the ground, when it happened he was asleep, which was owing to some spirits and porter that he had taken that evening. The upper arm is much swollen, and fractured obliquely in the centre; there is a slight extravasation on the inside of the middle of the arm, and a depression. On the right side, just at the top of the temporal fossa, is a wound of the scalp, which extends from an inch above the helix, and a little posterior to it, obliquely upwards and outwards, to about three inches above the right external angular process of the os frontis; and from near the termination of this anteriorly, proceeds another, with a widened base, to the anterior and superior angle of the parietal bone. The pericranium is divided to the extent of half a crown, and the upper part of the temporal muscle is wounded; the skull is not fractured.

The patient is 5 feet 5 inches high; stout; plethoric—in the habit of living freely, and drinking plentifully of spirits—Lying on his back in bed, in a drowsy state; when asked any question, he answers it coherently, and then falls in a a doze again—Countenance flushed—Eyes, when exposed to the light, active—Pupils small—Skin hot and dry—Tongue red at the extreme edges, then of a pale white on the fore part, and a light brown on the back part—dry.—Has no desire to eat, but is very thirsty.—Bowels open once since the accident.—Has not made any water since he was at stool, three o'clock this morning.—Respiration 22, laborious; can take a full inspiration without pain.—Pulse 96, full, but may be easily compressed. Heart's action corresponds to that of the pulse.—Abdomen full, but not painful; complains of pain only in the head and arm, and in

those parts to no great degree.—Has not been sick since the accident.—11, *a. m.* pulse 96, full, pain in the right side of the head.—Breath smelling of spirits.

V. S. ad ℥ xviii.

Towards the termination of the bleeding he became pale, and slightly faint.

½ p. 11. *a. m.*—Very thirsty,—pulse more frequent than before the bleeding, but less full, more compressible, 112, still pretty full.—Respiration 30.—Had some buttered roll and tea for breakfast.—The head was shaved, and the parts brought as closely into contact as possible, by means of adhesive plaster, but at the extremity of the wound, anteriorly, a portion of the scalp was wanting, and corresponding to this the bone was denuded.—Head bandage was applied, and a poultice over it.—The arm was placed on a pillow, and the fore-arm bent on the body: spirit wash applied.

℞ Extract Col. Comp. gr. x. Hydrarg. Subm. gr. v. M.—Capt. statim.

8 *p. m.*—Has been dozing ever since the morning, complains of a numbness in his head, and smarting in his arm.—Respiration more natural, 22—pulse, 80, not so full.——Bowels not opened since 3 *a. m.*, not so thirsty. Tongue most and of a pale white.

℞. Olei Ricini ℥ j.

Has taken some milk and bread since the morning.

N. B. Blood buffed and cupped.

Oct. 26. 10, *a. m.*—Bowels opened five times since yesterday.—Passed a restless night, on account of lying in an uneasy position, and disturbed his arm a good deal.—Breathing a little sonorous, 24.—Complains of pain no where except in his back, which aches a little.—Pulse 96, full.—No pain on pressure in the abdomen.—Tongue red at the tip and edges.—Has taken a basin of milk for breakfast.—Pupils natural.

8 *p. m.*—Wound was dressed this afternoon; edges rough, and separated considerably.—Feels comfortable.—Bowels open once since the morning.—Pulse 84, soft.

R. Infus. Rosæ, cum Sulph. Mag.; cochl. jj. mag. ter die.

Oct. 27. half-past 8.—Passed a better night: cheerful; says that he thinks the head bandage was applied too tightly, as he feels a numbness in the head; the arm has not been disturbed during the night; lying on a padded splint, in a half-extended position, with the fore-arm inclined towards his body, and his hand resting on a small pad.—Tongue not so moist as yesterday, but not more furred. Respiration 24, easy.—Breathing not so sonorous.—Pulse 78, soft.

4 *p. m.*—Has complained of uneasiness in his head during the day.—Wound was dressed this afternoon, and begins to discharge offensive matter; redness and swelling down the right side of the neck.—Bowels open once during the day.—

Pulse 96, rather hard.—Has taken nothing but a little milk and some rice pudding.—Respiration 26, more sonorous.

V. S. ad. ℥ viii.

28.—Was disturbed in the night by a noise in the ward.—Head painful in the night.—Red blush down the other side of the neck.—Feels easy at present.—Pulse 90, easily compressed.—Bowels moved once in the night.—Respiration 24, sonorous.—Skin natural.—Dry cough.—Blood slightly buffed.—To the swelling on the sides of the neck spirit wash is applied.

Oct. 29.—The wound was dressed yesterday with a simple bit of lint, and enveloped with a linseed meal poultice; discharges a good deal of thin puriform matter.—Passed a very good night; disturbed his arm a little.—Skin comfortable.—Not thirsty.—Pulse 78, full.—Tongue pale white.—Bowels moved twice since yesterday.—Pain at times in the head.—Milk diet.—Continues the rose mixture.—Wound discharged a good deal.

30.—Did not sleep well last night, from pain in his back.—Tongue red at the tip and edge.—Pulse 96, and soft.—Skin cool.—Splints applied all round the arm.

31.—Slept well.—Free from pain.—Tongue cleaner.—Pulse 90, soft.—Bowels open once since yesterday.—Appetite not very good.—Still thirsty.—Granulatious beginning in one part.—Healthy pus—copious. Redness of the sides of the neck less.—Poultice and opening mixture to be continued.

Nov. 1.—Bowels open twice since yesterday.—Tongue cleaner.—Pulse 72, fuller.—Wound just the same.

Sunday, Nov. 2.—Slept pretty well.—Tongue moist, furred at the root; clean at the tip.—Pulse 96, soft.—Bowels open twice since yesterday's report.—Flatulent.—Still on the milk diet.—Wound itches a little, and painful at times; dressed twice a-day.—Arm bound by four splints, well padded, placed on a pillow in a half-extended position.—Swelling very much reduced.

Nov. 3.—Slept very well last night.—Bowels open once, copiously.—Tongue much cleaner.—Wound and arm doing well.—Pulse 72, soft.

Nov. 4.—Sat up to-day for three hours.—Slept well.—Bowels open once since yesterday.—Tongue, appetite, &c., as yesterday.—Pulse rather quick, 108.

5.—Slept very well.—Sits up great part of the day.—Wound beginning to granulate, excepting where the bone is denuded.—Tongue covered with brown fur at the root.—Pulse 98, rather hard.—Arm disturbed in the night.—Bowels open once.

6.—Disturbed in the night by noise in the ward.—Bowels open once.—Other symptoms as yesterday.

7.—Tongue red at the edges, furred in the middle.—Pulse 102, full.—Bowels not open.—Where the bone is divided, no

granulations from the skin near that part.—Bones of the upper arm still ride.

It was found that the getting out of bed, together with the exercise of putting on his clothes, disturbed his arm, and he was ordered to keep in bed, and not get up; this he did till the latter end of November, by which time he was able to get up and walk about, firm union of the bones having taken place; he was kept on milk diet a little more than three weeks after the accident, and after this he was allowed eight ounces of animal food and a pint of porter a-day. The wound in the head soon healed where the bone was not denuded; in that part exfoliation of the outer table commenced, which was promoted by the application of pieces of lint wetted with nitric acid wash, and warm linseed meal poultices; and about the 7th of December a thin piece of bone came out about the size over of a penny. Since this, healthy granulations have sprung up in the part, and he is now nearly well. The right arm is a little stiff. Up to the present time (January 1st, 1824) he has kept his bowels regular by the infusion of roses and sulphate of magnesia, and expects to leave the Hospital in about a week.

Disease of the Spine.

Henry Stephenson, æt. five, was admitted into Isaac's ward, St. Thomas's Hospital, under the care of Mr. Tyrrell, Oct. 2d, 1823, with an affection of the spine; he also had strumous ophthalmia. The following medicines were ordered for the child:—

℞. Hydrarg. subm. gr. j.

Pulv. Rhæi gr. x. fiat pulv.; secunda quaque nocte sumendus.

Unguenti Cetacei pauxillum ad oculos applicandum.

Emplast. Lyttæ pone aurem, which apparently relieved him.

On Tuesday evening, Oct. 14, was taken with sickness of the stomach, which continued till 9 *p. m.* the next day; he vomited often, but little at a time; the contents thrown up at first were white, afterwards black, and similar to coffee grounds. During this time some saline mixture was administered: at 9 *p. m.* (October 15th), when the sickness went off, he became thirsty, but was very cheerful, and in an hour's time, at 10 *p. m.* was taken in a convulsion fit and died. He has had none of the diseases incident to children, viz. measles, small pox, &c., but was always subject to great difficulty of breathing.

N. B. This account was obtained from the child's nurse after its death.

Inspectio cadaveris Stephenson, æt. five years.

The body was examined thirty-seven hours after death, by Mr. Tyrrell, in the presence of his dressers, and some of the pupils.

External Appearances. — Three feet in length, stout,

head large, countenance pale, slightly sallow, extravasation under the soft parts of the back, legs, arms, sides, and front of the chest.

HEAD.—Vessels of the pia mater were preternaturally distended with blood; throughout the whole of the cortical substance there were minute red points, no water in the ventricles, plexus choroides redder than natural, and the pia mater, covering the tuberculum, annulare, appeared opaque. The brain was of the natural firmness, but the left hemisphere appeared larger than the right.

CHEST.—On opening the chest, a large portion of the thymus gland was seen on the upper part, soft and flabby. The lungs were gorged with blood, and of a very livid colour throughout, more so posteriorly than in front, and of a knobby feel in some parts. Pleura was very red, but there was no lymph on its surface, nor adhesions of it to the lungs; lower half of the trachea was red on its internal surface, and the bronchiæ were filled with a thin yellowish fluid. Bronchial glands on the left side very much enlarged, and pressing on the vessels and bronchia of that side. The heart was healthy; the blood and the veins had not coagulated; there was a slight lateral curve of the spine, and a posterior one; the body of the tenth dorsal vertebra was nearly absorbed.

ABDOMEN.—Stomach distended, removed from the body, and carefully examined. Contained half a pint of dark-coloured fluid; inner coat natural; liver of natural size, and only a little paler than natural; gall bladder distended with bile; intestines natural and empty, excepting in the cœcum, which contained a little fæces. Nothing else was ascertained in the abdomen.—The spinal cord was not examined.

GUY'S HOSPITAL.

Fracture of the Skull, with Depression.

Robert B., æt. 14, was admitted into Accident Ward, Sunday, December 28, 2 *p. m.*, with an injury to the head. His friends say, that on Friday (December 26) before his admission, he was thrown from a horse, since which time he has been in a state of partial insensibility. On examining the skull, there was felt, a little below the posterior inferior angle of the left parietal bone, a fissure, and a small wound in the scalp communicating with it. His pupils were dilated; pulse 50, full and slightly intermitting; breathing laborious, bowels confined. An incision was made in the scalp, 3 inches in length, in the course of the fissure, when it was found that there was a fracture parallel to, and a little below the posterior part of the left parietal bone,

with a small portion of the skull depressed. The bleeding from the wound was promoted by means of warm applications. Soon after the operation had been performed, the pulse rose to 90. Five grains of calomel, and ten of compound extract of colocynth were given him, and he was ordered to be kept very quiet. His bowels not being open in the evening, 5 grains of calomel were repeated, and he was bled from the arm to ten ounces. On the following morning some more opening medicine (house physic) was given him, and in the middle of the day he had a copious stool, which relieved him considerably. The blood was not inflamed. On the Tuesday 5 grains of calomel were again given him, and in the following morning the house medicine, which acted on his bowels twice; during the whole of the time he was but a little delirious. To-day (Jan. 1st) he is not so well; 5 grains of calomel ordered him in the morning, which have not operated; he is rather more delirious, lies on his back, complains of a little pain in his head; pupils dilated: countenance anxious: tongue covered with a white fur; thirsty, pulse 60, full and laborious.

V. S. ad ℥ viij.

To have a common enema immediately; and two table spoonsful of infusion of senna and sulphate of magnesia every two hours, till the bowels are opened.

He was bled in the afternoon about 4 o'clook; a short time after the operation, the pulse had risen to 80, and was much more free. He is allowed nothing but a little tea or gruel.

Laceration of the Scalp, with wound of the Face.

John A——, æt. 18, in the habit of looking after wild beasts, was admitted into Naaman's ward, Monday, December 29, under the care of Mr. Lucas.—Says, that between 11 and 12 o'clock in the morning, he was stooping under the cage in which a tigress was kept, when the beast put her paw out through the bottom, the under bar not being closed, seized him by the head and face, and kept him in that state for near a minute, when he disentangled himself; he was brought to the Hospital in an hour after the accident, with the scalp covering the occiput, particularly on the left side, lacerated to a considerable extent, and in a semicircular direction: the occipito-frontalis was wounded a little, and the bone damaged in one or two places; besides this, there was on the right side of the face a wound extending in an oblique direction, from the angle of the jaw to the top of the nose. The wounds were immediately dressed; five sutures were used to bring the edges of the scalp in apposition, together with slips of adhesive plaster; two

sutures were applied to the wound in the face, which was also dressed in the same way as that on the scalp. When he reached the Borough, all hæmorrhage from the wound had ceased, but a considerable quantity of blood had been lost; on the following day he was rather feverish, and ten ounces of blood were taken from the arm: since then he has felt easy, with the exception of a burning sensation at times in his face, the upper part of which is slightly red.

Jan. 1st. The wounds dressed to-day, and adhesion had taken place in some parts of the scalp; the face also looks well. His bowels have been kept open by infusion of senna and sulphate of magnesia: strict attention is also paid to his diet.

MIDDLESEX HOSPITAL.

Case of Ectropium, or Eversion of the Eyelids, with consequent exposure of the red internal tunic; the (Eraillement of the French writers.)

Eleanor Oliver, aged nine years, admitted an in-patient of this hospital on 27th November, 1823, with a complete eversion of the upper lid of both eyes.—She had attended the Mary-la-bonne charity school, where a great many of the children have been afflicted with the same disease.

She had been a sufferer from this complaint for above five weeks before her admission into the hospital. Its first origin appears to have been occasioned by her taking cold; although both the patient and her friends attribute its commencement solely to infection derived from her school-fellows. The disease first made its appearance with inflammation and swelling of the conjunctiva of the superior palpebra of both eyes, which continued rapidly increasing until the membranes covered the eye-balls and descended as low as the inferior arch of the orbit. At this time the eversion took place, the parts still occupying nearly the same space as previously to that occurrence; no part of either of the canthi could at this period be discovered—the whole faces of the everted lids had the appearance of fungous granulations—the tears fell copiously from the centre of the eye, but without washing the eye-ball in their descent.

On her first admission she had a dose of the pulv. jalapæ comp. her bowels having been for some time very much constipated—the tongue at this period was clean, pulse regular, and general health tolerably good.

For the purpose of subduing this troublesome affection, the following treatment has been pursued. The everted surface of the conjunctiva, as well as that part which retained its natural situation, was scarified every other day, and sulphate of copper alternately applied. After the latter operation, a

little oil was used, and cold spring water kept constantly to the parts by means of pledgets dipped in it, and frequently renewed. At present the left eye is treated with an application of the argenti nitras at three different points where the excrescences are at their greatest elevation, by which means small sloughs have been thrown off; oil is afterwards applied to prevent the application from spreading too extensively. The conjunctiva is then scarified as already described. A small quantity of vinum opii has been dropped upon the eye-ball, which, together with the canthi, may now be perceived by raising the lid, which, after the dressing, is carefully inverted, and kept in its natural position by a compress and double-headed roller. The applications to the other eye are continued as above mentioned, the eye-lid placed in its natural position, and secured in that situation in the manner already alluded to.

Dec. 31. The above treatment has been found amply successful; but there is a slight inflammation and thickening of the cornea observable at present. The medical treatment during the progress of this affection has consisted chiefly of occasional purgatives of the Pulv. Jalapæ Comp. and small doses of calomel and antimony exhibited daily.

Fracture of the Patella.

Mary Bolton, aged 56, admitted on the 27th of December, on account of a transverse fracture of the patella of the right knee occasioned by a fall on the pavement, whilst walking through the street in pattens. Upon examination, it was found that the divided portions of the bone were scarcely separated to the extent of half an inch; the tendinous expansion covering the patella not having sustained any laceration or rupture, by which the extensor muscles were prevented from inducing a further separation of the fractured parts. In the first instance (in consequence of considerable tension and swelling of the integuments) leeches and cold lotion were ordered, since which the usual apparatus has been applied, for the purpose of keeping the fractured portions in apposition, and counteracting the action of the muscles. The state of her general health has been attended to, which at present is tolerably good.

March 10. This fracture has united by bone.

Observations on the Passage of the Crystalline Lens into the anterior Chamber, by Doctor LUSARDI.

First Case.—On the 16th of April, 1822, I was consulted at Lyons, on the recommendation of Doctor Richard by Mademoiselle Fevraud, æt. 27, of a strong constitution, sanguineous temperament, who in the month of February, of

of the same year, had received a fall, and escaped without receiving any injury, with the exception merely of being stunned, and having, at the time of the accident, a sparkling before the eyes. The family with whom she lived, remarking that the spot, which had been for several years on the eye, was increased; she looked into a glass, and was surprised to see her right eye nearly white. The day passed away without any unpleasant symptoms;—in the night, pains in the head came on, and on the next day they became worse. The eye became red, the inflammation spread during several days; she consulted some persons in the profession, whose opinions were divided on the subject;—some thought that it was a shot; others, that it was pus extravasated behind the cornea—in fine, an hypopiun;—they prescribed a treatment more or less varied, but without any relief.

Dr. Richard was the only one who had discovered the cause of the inflammation: it was the crystalline lens, which, having been opaque for a long time, had passed into the anterior chamber by means of the fall which this lady had received. The disease being recognised, extraction of the crystalline lens was proposed;—the patient consenting, we deemed it advisable to wait till after the menses stopped, which continued five or six days; during that time I thought that the active inflammation of the globe of the eye, and the lids, would be increased by the section of the cornea, and that suppuration, perchance a large cicatrix, or even the destruction of the eye, would ensue. The inflammation was so intense, that I was obliged to use my *contentif*, in order to separate the lids, and examine the state of the eye.

From the account given by the patient and the physicians, I thought that there was a paralysis of the retina, which deterred me from the operation of extraction, and I decided to adopt that for depression. The next day, I introduced between the eyelids extract of belladonna, of the size of a pin's head, to dilate the pupil, and allow greater facility in getting the opaque crystalline across the pupils, in order to depress it conveniently, as is adopted in common depression.

After the employment of the belladonna, the pupil being very much dilated, the opaque body was perceived. The third day it became contracted to its usual size, and the inflammation began to diminish towards the sixth day. The antiphlogistic plan was prescribed with the greatest strictness, together with other curative measures. After three weeks' similar treatment, the eye was in a most satisfactory state.

Dr. Lusardi adds another case, but it does not differ in any material respect from the first.—*Journal Universel des Sciences Medicales. Nov.*

LECTURE XXI.

Operation for Popliteal Aneurism.

As the time of last evening was occupied in performing the operation for popliteal aneurism, I left one or two points unnoticed which it will be important to bear in mind, therefore will state them now. In the first place, it has been conceived that considerable relief might be afforded in cases of aneurism, by medical treatment. It is natural to expect, that if by any means the action of the heart and arteries be diminished, the result would be that the aneurismal bag would yield less, and consequently be reduced: experience does not however justify this conclusion. I will tell you a case which exemplifies the truth of what I state. A gentleman came to town, and was operated on for popliteal aneurism; he recovered in the usual time, no untoward circumstance occurring during his recovery; in twelve months afterwards, he became afflicted with aneurism of the aorta, just at its curvature. He came to London, and having been under my care before, he applied to me again. On examination I discovered the aneurism. A consultation was held on this patient in July, when it was agreed that he should be kept low, be occasionally bled, and be allowed small quantities only of animal food, as it was hoped that by this means the action of the heart and arteries would be considerably lessened. Well, this regimen was prescribed in July; the patient adhered very rigidly to it; but the February following he died, from the bursting of the artery into the chest, having lived a shorter period than usual in these cases. Now it is probable that he would have survived longer, had he been treated otherwise; and I will explain to you how it is that keeping the patients so low does not agree with them: by keeping them so low, the constitution is rendered irritable, and then whatever is lost in the momentum of the circulating fluid, is gained in velocity. I have seen loss of blood in the treatment of aneurisms occasionally useful. When the chest is affected, and breathing laborious, it will be right to take blood; and the best state in which the body can be kept is a little below par; that is, a little under the natural state. Strict attention must be paid to regimen; and it would be highly improper to give stimuli of any kind.

The second point is the

chance of obtaining a cure by the application of pressure on the artery or aneurismal bag. Very many years ago, I had an iron ring made, with a pad on the outer side, and a screw on the opposite: this was put on the limb, pressure on the outside was made against the thigh, and on the inside against the artery; the use of this was worse than the operation. I applied it on a man at the other Hospital, and I will tell you how long he kept it on—twenty-four hours only. In three hours from its first application he began to complain of pain; in a few hours afterwards it became more; and in less than twenty-four hours the man said that he would submit to any operation rather than suffer the pain: therefore it is impossible to practise it. I have tried the same experiment on the upper extremity, but without its leading to any useful results. This plan of pressure on arteries does not succeed, and therefore ought to be abandoned.

Well, Gentlemen, I will describe the alterations which have taken place in the mode of performing the operation for popliteal aneurism since the time of Mr. J. Hunter. Mr. H. made the incision in the middle of the thigh;—the spot where it is made at present is one-third down, as in the middle of the thigh the artery is deeper situated: well, therefore, one-third down the thigh is the place where you ought to operate. Now Mr. Cline (with whom I formerly lived) thought that it would be an improvement in the operation, if, instead of allowing the ligature to remain till the process of ulceration had begun, he removed it before that period. that hæmorrhage might be prevented, and the operation rendered simple; and in the first case of popliteal aneurism which he had after he thought of this plan, he tried the experiment,—laid bare the artery, applied a broad ligature, and tied it firmly on the artery; but in order to prevent the knot slipping, he put between it and the vessel a small piece of cork. The first case on which he tried this succeeded perfectly well. Here the learned professor, pointing to a specimen taken from the man on whom this experiment had been tried, said, that the artery was quite obliterated; the ligature remained on till the adhesive process had begun; but before ulceration had taken place, the wound suppurated, and ultimately closed. The patient died some time after of an affection of the lungs; and on exa-

mination of the body, the artery was found as just described; but on repeating this mode of operation, it was soon ascertained that it produced more irritation than the other. Here is an example (*pointing to a specimen*), in which the artery ulcerated a short time after the broad ligature had been applied: it led to great irritation, and the process of ulceration was rendered more speedy; therefore the operation cannot be performed; and Mr. Cline, with all the candour for which he is so remarkable, gave it up, as an operation, however feasible, yet one that was attended with considerable risk. Well, then, it has been proposed, and very ingeniously, by Mr. Abernethy, that two ligatures should be applied, and the artery divided between them. Now this idea arose from the circumstance, that where the ligatures are applied to arteries after limbs have been removed, no hæmorrhage comes on; but the two cases essentially differ: in the one, where amputation has been performed, retraction of the artery, before the application of the ligature, has taken place; it is already drawn into the cellular tissue, and there is no danger of after hæmorrhage from its retracting any more; but in the other, where ligatures are applied on arteries for the cure of aneurisms, as soon as the process of ulceration commences, hæmorrhage often ensues from the retraction of the vessel, which had not taken place before. I had a case in the other Hospital, which was going on well to the fifteenth day, when, as he was lying on the bed, a sudden rush of blood occurred, and had there not been a dresser in the room at the time, he must have died: ligatures were applied a second time. If an artery is whole when the ligatures are applied, separate it from the cellular membrane sufficiently to allow of retraction; but if the artery is divided, as after amputation, there will be no occasion, as the vessel has already retracted before the ligature is applied, and this is the reason that there is less danger from hæmorrhage when one ligature only is applied, than when there are two. But this operation led to another dangerous consequence—there was the danger of the slipping of the knot. Mr. Cline, senior, in the operation for popliteal aneurism, put on two ligatures, and whilst the dresser was sitting by the patient, hæmorrhage came on: the tourniquet was instantly applied, and Mr. C. sent for:

when he came, on looking into the wound, he saw one of the ligatures loose, and floating in the blood. On examination, he found that the ligature had escaped from the upper part of the artery, and that the lower one had nearly slipped. He immediately applied two fresh ligatures. Therefore there is the danger of the knot slipping where there are two ligatures used; and on this account it has been recommended that a needle should be put through the artery, with a fine ligature in it, as by this means the danger from hæmorrhage would be prevented. It was found by Dr. Jones, who has written an excellent work on the methods nature adopts in restraining hæmorrhage, that if fine ligatures were applied on arteries, they would cut through the internal coat, and leave the external undivided; the elastic coat would remain whole. He tried experiments on animals, and from these he learnt that, when fine ligatures are applied, inflammation takes place, and the adhesive process is, in a very short time, produced, by which means the canal becomes obstructed; he therefore recommended, that in operations for aneurisms, fine ligatures should be applied only for a few hours, and then removed.

In consequence of this, I adopted the plan in the case from which I took this specimen (pointing to one on the table), in order to see if it would succeed; it has been tried in the following cases, and is an operation that ought not to be performed. In the first place, a fine ligature was put on the femoral artery, tied tightly, and in a few hours removed; the result of the operation was, that the pulsation was stopped for a short time, but in a few hours it returned, and the size of the aneurism began to increase. A consultation was held, and it was determined that a ligature should be applied in the usual way, and allowed to suppurate and ulcerate, and the patient did extremely well. In two other persons I tried this plan: one for an aneurism on the popliteal artery, the other for an aneurism on the radial artery: in the first case I used a fine thin ligature, and tied it very tight; in 30 hours I loosened it. Now, when this man was on the table, I said to myself that the operation was not founded on a right principle. I looked at the wound, and saw that the adhesive process

had commenced, and that in drawing the ligature out, I had destroyed all the adhesions which nature had set up: the pulsation had not ceased, and I pulled the ligature tight, and allowed it to remain 42 hours longer, and then removed it; thus, after the lapse of 72 hours in the whole, it did not return. Thirteen days after this, as I was coming into the square of the other hospital, one of my dressers said that hæmorrhage had come on from the man in Job's ward, from whom the ligature had been removed, and that it was evidently arterial. I said that this was exceedingly curious. I went up, and found that it was the case: a tourniquet was applied; the hæmorrhage did not return, and the patient did extremely well. If the ligature, after being on for 72 hours, does not produce adhesion, the uselessness of *temporary ligatures* does not admit of a doubt —*they ought to be abandoned.* In the aneurism of the radial artery, I removed the ligature 24 hours after it had been applied, but the pulsation returned; I made an incision on the tumour, and applied a ligature above and below, and the aneurism was cured.

It would be an extremely desirable thing if any person invented a ligature composed of materials which would admit of solution: he would, by such an invention, greatly serve his profession. It has been said, that ligatures formed out of the untanned skins of kids will answer such a purpose, that they will become absorbed; but they do not, I understand, succeed. I thought that a ligature made of catgut would admit of solution, and I tried it on a man of 80 years of age, on whom I performed the operation for popliteal aneurism: the catgut ligature was cut close to the vessel; the wound healed over, and no bad symptom followed. The experiment succeeded, it is true, in this case; but I have used the catgut ligature in three other cases since, and did not find it at all superior to the common ligature: in each of the three cases it came away by suppuration and ulceration, as in common cases; it did not therefore succeed. In the old person there was less tendency to inflammation, and that was the reason of its succeeding. I made some experiments on dogs, with a view to ascertain the solubility of catgut. I tied the carotid of a dog, and used the catgut ligature; in a fortnight after I killed the

animal, and found that the ligature had not been dissolved, but that it had cut through the artery, and was situated in a cyst, like that which is formed round a ball, between the divided ends of the vessel, in a quiescent state; therefore this substance does not admit of solubility, but will remain sometimes without producing irritation. On the whole, catgut ligatures are not at all superior to the common ones. Some animal matter, of the form of gluten, made into ligature, might do; but this is mere conjecture. At present there is no ligature known which is capable of being dissolved and removed by the absorbents.

Well, Gentlemen, I have made all the observations respecting the improvements in the operation for popliteal aneurism that I intended, with the exception of the plan of cutting the ligature close to the knot, and then leaving it to its fate, and to come away as it can; but experience shows that the irritation which is produced by this mode is attended with great mischief. This is the plan Mr. Hunter adopted, when he put the ligature for the first time on the femoral artery, in operating for popliteal aneurism; the wound closed kindly, and the ligature afterwards came away by suppuration and ulceration. Since Mr. Hunter's time it has been tried again, but is now nearly given up by all in the profession. On the whole, rest assured, that the best mode of applying the ligature is that now commonly adopted: tie a tight knot with a fine ligature, and then cut one end of the ligature close to the vessel, and let the other hang out of the wound. If in the operation the artery has been disturbed much from the surrounding cellular membrane, for an inch or so, apply two ligatures, and divide the artery in the centre, and there will be room for the retraction of the artery; but if, on the contrary, it has not been much disturbed, apply only the single ligature; broad ligatures must, however, on no account, be used, as they are very likely to produce constitutional irritation, and consequently cause the parts to suffer for a great length of time.

When the operation is performed, what you should do is this: you are to bring the integuments close together by means of strips of adhesive plaster, leaving, however, a small space between each, so that the matter may escape through the interstices. No bandage, or

roller of any sort, should be applied, as the blood-vessels of the limb would be compressed by them, and injury be done to the part. As for the position of the limb, it should be placed on a pillow, and on its outer side. If the patient were to rest on his heel, two evils would be likely to arise:—1st, there would be the necessity of supporting the knee by placing something under the ham which would stop the circulation in the vessels of the part; and, 2dly, there is danger to be apprehended from gangrene, from the heel resting long in one position, as this is apt to produce sloughing of the parts. The outer position, then, is the one you should choose, occasionally changing it, so as to prevent pressure in any one particular part.

Be on your guard, Gentlemen, to preserve the warmth of the limb, for there is danger from gangrene in cold weather. Some years ago, I was very near losing a patient by not attending to this circumstance. A young gentleman, on whom I had performed the operation for aneurism, complained when I visited him (which was in the evening of the same day) of a weight in the foot: this induced me to look at the limb, which probably I should not otherwise have done, and I found that the foot was quite cold and benumbed, which was occasioned by there being no fire in the room at a time when the weather was quite cold. I sat down by the bed-side of the patient, and kept rubbing his leg and foot with a warm flannel till heat was restored to the limb. Ever since that time I have wrapped the limb up in a piece of flannel or a stocking, and sometimes put jars filled with hot water to the feet, particularly if the weather is cold, then the part will be preserved gently warm. I once saw a patient lost by the folly of a dresser at the other hospital. In the evening after the operation, seeing the limb a little swollen, he said to the sister, "Suppose you apply the white wash (liq. plumbi. super. and water) to this?" On the following morning gangrene came on, in consequence of the cold produced by the evaporation, the power of the circulation in the limb became destroyed, and the patient died.

The means by which the circulation is carried on when the femoral artery is tied is by the arteria profunda; from this anastomosing vessels are sent off, which communicate with branches from the anterior tibial. It sometimes happens

that the aneurism will be reproduced by means of a vessel which comes off above the part where the ligature is applied, and enters the artery just above the aneurismal sac, and thus reproduce the aneurism. I scarcely should have mentioned this to you, if I had not seen an instance of this a short time ago, in a man at Guy's, who had been operated on by Mr. Key for popliteal aneurism, and who was discharged cured. This person came back to the hospital with another swelling in the ham, and a pulsation in it, in the same spot as the former aneurism: he had suffered considerable pain; the integuments of the knee were very rigid, and the bone, from the long-continued pressure on it, had become in a diseased state. I amputated the limb, and found the aneurism reproduced of the original size, and an artery could be distinctly traced going from a little above the tumour up the thigh. It therefore happens that aneurisms are reproduced by means of arteries which proceed from above the spot where the ligature is applied, to just above the aneurismal sac: these cases are, however, extremely rare.

The time at which the ligature separates is generally from the 12th to the 14th day; the 14th day is generally the extreme; the 12th day the minimum of separation; but it is variable according to the different kinds of ligatures used. I have seen a ligature remain on as long as twenty-eight days, where a broad one had been used; I have known a ligature come off as soon as the 5th day, but in this last case it was put on the brachial artery for a puncture made in bleeding; on the 8th day it had come off, and no hæmorrhage ensued; therefore, if early inflammation ensues, the separation will be rapid; but if there be a broad ligature, and the inflammation indolent, it will be from twenty-five to thirty days. Here let me give you one or two practical hints. If the ligature comes away, and without any hæmorrhage, you will think the patient safe: he is not so by any means. A man was pushing a knife through a cable, when it slipped, pierced the left thigh, and wounded the femoral artery; a tourniquet was applied, the best that could be made, for the accident happened on board a vessel in the river: he was brought to Guy's hospital, and I was sent for. On my arrival, I found that the knife had perforated the artery, and therefore applied a

ligature above and below the vessel; on the 14th day, they separated, about nine in the morning, I believe; about twelve he began to wash and clean himself, and soon after a jet of blood took place: I was sent for, applied other ligatures, and he was obliged to keep his bed nearly as long as before, though I think the ligatures separated a day or two sooner. When they separate, therefore, be on your guard, and let the patient remain quiet two or three days afterwards.

The operation which has been shewn to you, Gentlemen, for popliteal aneurism, is the one used for aneurisms of the anterior and posterior tibial arteries, situated at the upper part. I saw Mr. Lucas, the father of Mr. L. the late surgeon at Guy's, perform that operation for aneurism of the anterior tibial artery. But this operation is not to be performed when the aneurism in these arteries is near the foot; I have not seen an aneurism of the posterior tibial behind the inner malleolus, but I have of the anterior tibial on the front of the foot. I saw Mr. H. Cline, in an aneurism of the anterior tibial, cut down on the tumour, and apply a ligature just above it, but it did not succeed. In these aneurisms, you must make an incision on the sac, and apply a ligature both above and below it.

LECTURE XXII.

We are, this evening, Gentlemen, to consider the subject of the taking up of the arteries in the different parts of the body, for aneurism.

The Application of a Ligature on the external Iliac Artery.—It is not at all an uncommon occurrence to meet with an aneurism of the femoral artery just below Poupart's ligament, of which here is a specimen (pointing to one on the table), exactly similar to the aneurisms which occur in the ham. Now, with respect to recurring to the operation in this complaint, I have performed it in nine different instances for aneurism of the femoral artery: one of those persons was a surgeon, who has since married, and is extremely well. The mode in which the operation is performed, is as follows:—[There was a subject on the table during the whole of the lecture, on which the learned professor shewed each operation.] I do not make a straight incision in the course of the artery, but one of a se-

milunar form. I begin the incision a little above the abdominal ring, and extend it, in the shape of a crescent, to the edge of Poupart's ligament*, and then continue it to about an inch and a half from the inner side of the spine of the ilium, where it terminates. By this incision I lay bear the tendon of the external oblique muscle; in the second I divide this tendon, and expose the internal oblique and transversalis muscles. Having arrived at this step of the operation, there will be no occasion to make any further use of the knife. The next step will be to raise the internal oblique and transversalis muscles from Poupart's ligament, by introducing the finger behind them. Well, having done this, you reach the passage of the spermatic chord, and you feel it distinctly; and then behind this the pulsation of the iliac vessel. You now draw up the internal oblique and transversalis muscles with the finger, at the same time elevating the spermatic cord a little, and then carry the finger into the abdomen, behind the peritoneum, and you ascertain the beating of the iliac artery. Having found the artery, I put the aneurismal needle into the opening, and introduce it under the vessel. You will recollect that the artery is accompanied by a vein, and that the vein is on the inner side; the artery on the iliac, the vein on the pubic side; the operation may be performed without the least difficulty, and is as easy as tying the femoral artery; there is only one circumstance that occasions the least danger; and that is the epigastric artery passes up from the pubic side of the iliac vessel, and on the inner side of the incision; but this, however, may be avoided. I will clean the artery a little from the surrounding parts, and take it up; it is very desirable to ascertain that the vein is not secured, because the interruption to the return of blood would be very injurious; if the artery should be exposed as much as it is on the subject before me (an inch and a half,) two ligatures must be employed, but if a small portion only of the vessel is laid bare, a single ligature will be all that is required. When you use two ligatures, you will separate them from each other, drawing one upward and the other downward, and leaving about three-quarters of an inch of the vessel exposed at the

* The convexity of the incision towards Poupart's ligament.

extremity of each ligature; for if this be not done, on dividing the artery, there will be danger of the ligature slipping off; the instrument with which the artery is usually divided is the probe-pointed bistoury; when it is done, retraction of the vessel immediately takes place: there will be no danger of including the nerve in the ligature, as the anterior crural does not accompany it; the vein and artery are included in the sheath, and the nerve is on the outer side. Now the edges of the wound are to be brought together, strips of adhesive plaster are to be applied, and the ligatures are to be allowed to come away by suppuration and ulceration.

Here is a curious specimen (showing a preparation), showing the mode in which the circulation is carried on after the external iliac has been tied; the limb has been injected, and the anastomosing vessels are distinct; you also see the part of the iliac artery where it was tied. If, then, you were asked what carries on the circulation after the external iliac has been tied, your answer would be—the glutæal principally; this passes out through the ischiatic notch, comes over the ilium to the groin, and enters the femoral artery, a little below Poupart's ligament; the second artery is the ischiatic, it arises from the termination of the internal iliac, passes out of the pelvis between the trochanter major and tuberosity of the ischium to the back of the thigh, and sends a few branches to the arteria profunda and external circumflex arteries; the third artery is the obturator, it passes out through the obturator foramen and joins the internal circumflex artery; also the external pubic communicates freely with the internal pubic; therefore, if asked by what vessels the circulation is carried on after the external iliac has been tied, you would say, principally by the glutæal.

Of securing the internal Iliac Artery.—An operation of extraordinary difficulty; it has been performed by Mr. Stevenson, of the West Indies, and since by two other individuals, one of whom was Mr. Atkinson, of York, for the purpose of securing the internal iliac artery. None but a man endowed with the knowledge which Mr. S. possessed would have dared to undertake such an operation, but Mr. Stevenson was educated by Mr. Burns of Glasgow, an enterprising man, and a most ex-

cellent anatomist. He was brought up in his dissecting-room, and this it was that led Mr. Stevenson to the idea of doing it. The operation consists of making an incision on the inner side of the spine of the ilium by which you cut through the abdominal muscles, and reach the peritoneum, which you turn to the opposite side, in order that the artery may be reached. Now, in this operation there is considerable difficulty in separating the ureter from the artery, because it crosses just at the bifurcation of the iliac artery, and if a man had not been well acquainted with the anatomy of the part, as Mr. Stevenson was, he might include the ureter in the ligature, and thus cause destruction of life. I put the ligature round the artery, (the learned professor continued showing the operation on the dead body,) that you may see it is the internal iliac which I have secured; I would not, however, have ventured to perform this operation, if it had not have been performed by another; I should have doubted my own powers and skill. It is an operation highly creditable to any one who performs it, but particularly to him who first attempted it. In what case, then, would a surgeon be called on to perform this operation? Why, for an aneurism of the glutæal artery, just at its commencement, so that it cannot be reached under the glutæal muscle; the operation must be performed in the manner I have just shown you.

Tying the Aorta.—I was sent for one day to go the other hospital, to see a man with violent bleeding from just above the groin, in consequence of a rupture of the external iliac vessel high up; the man had long been a patient there; the integuments had sloughed, and the patient was exceedingly reduced from loss of blood: under these circumstances, I thought myself justified in performing the operation of tying the aorta; for this step I have been greatly abused, but abuse, Gentlemen, does no injury; it shows a malicious and bad disposition on the part of those from whom it proceeds, and on a man possessing the *mens conscia recti* it will have no effect, unless he be destitute of common sense. I was situated as I have just described when I tied the aorta; I knew that the aorta had been obliterated within the chest, and that the circulation had been carried on by the intercostal arteries going

from above to just below the spot where the aorta was obliterated: the insides of the ribs are covered with numerous vessels. A gentleman of Dublin had a preparation, in which the aorta had been obliterated in the abdomen, and in this case the circulation was carried on by the lumbar arteries going from above to below the part where the vessel was obliterated; I had not the least doubt but that if the aorta was obliterated, anastomosing vessels would carry on the circulation, on the same principle as in any other part of the body; the greatest danger is not from gangrene when the ligature is applied on the aorta, nor is any thing to be apprehended as far as regards the carrying on of the circulation, but the danger consists in including the nerves, as I will presently show you.

Here is a specimen of a dog (pointing to one on the table) in which the aorta has been tied, and the circulation was carried on by the lumbar arteries; it is a very easy operation on the dog, and any one may perform it. I will tell you how you should do it; you must make an incision on the side of the transverse processes of the lumbar vertebræ, cut through the muscles and peritoneum, and then you may easily carry the aneurismal needle under the vessel, and bring it out of the wound, in order that you may see that you have not included the aortic plexus: if this be secured in the ligature, a paralytic affection of the lower extremities will be produced; now I wish particularly to state this, as I believe it to be entirely new, and that nothing new has been said on this subject in books. In the first two animals on which I performed this operation, I thought the paralysis was owing to the interruption of the circulation, but on repeating the experiment, I found it was produced by including the aortic plexus. If the aorta be well cleaned, and a ligature applied, and the vessel be returned to the abdomen, the dog runs about as if nothing had been done to it; and in five minutes after, it will eat bread out of your hands if it has been previously accustomed to it. The operation, I repeat, is exceedingly easy, and a boy may perform it. Well, after you have done this, wait a short time, kill the animal, and inject the arteries, you will find that the lumbar vessels on the inner side of the abdomen, and fore part of the

spine, had carried on the circulation. The reason of the paralysis in the case I have just alluded to was, that the aortic plexus was included, and the result was the destruction of life. Unfortunately, however, in the human subject you cannot make your incision near the spine, but must do it on the fore part of the abdomen to get at the aorta. If a case were to offer itself, similar to that I have told you of, I would immediately perform the operation again; and my own conviction is, that it can be done, and with success. At the time I tied the aorta, the patient appeared dying; after the operation had been performed, I was pleased in a remarkable manner to see him in the evening sitting up in bed adjusting his clothes; if the vessel had not been secured when it was, he would not have lived an hour. On the following morning, signs of constitutional irritation came on, in the evening he became much worse, and in forty hours from the time of the operation he died. Here is the specimen, (the learned professor exhibited the aorta which he tied,) in which you see a coagulum above and below the spot where the ligature was applied, sealing the extremities of the artery. Now, Gentlemen, if I should perform this operation again, the only difference that I would make, would be to cut the ligature close to the vessel, where it should take its chance, either to become encysted or absorbed. I commenced the incision in this operation in the *linea alba*, two inches above the umbilicus, and carried it to the same distance below, taking care in my descent to avoid the umbilicus, by giving it a semilunar turn or curve. I was astonished to find with what ease I could pass my finger down to the artery. However great the apparent difficulty of performing this operation, there was in reality none. The principal danger appeared to arise from the irritation produced in the intestines by the ligature, and that is the reason why I would cut the ligature close to the vessel. Time will show us whether this operation will be successful or not. I know, for my own part, that I would not hesitate to have my own aorta tied, if it would save my life for only forty hours.

Tying the Subclavian Artery.—The middle of your incision should be opposite to the external jugular vein, and centre of the clavicle. Speaking anatomically, the view of the

parts exposed in this operation may be thus described (Sir Astley exhibited them:) here you see the omo-hyoideus muscle crossing obliquely above the clavicle, below the sterno-cleido-mastoideus upon the inner side, and the jugular vein passing immediately opposite to the centre of the opening. Mr. Key informs me that in the operation which he performed at the other hospital for securing this vessel, that it was much facilitated by a free division of the clavicular portion of the sterno-cleido-mastoideus, and that after having done so, he was enabled, with a common aneurismal needle, to introduce the ligature under the vessel.—Soon after commencing this operation, you meet with branches of nerves from the axillary plexus—you must carefully avoid including these in the ligature; for it would be a fatal error if you were to tie them.—The scalenus anticus being the boundary of the artery on the inner side, you cut down for the purpose of finding its inner edge: this you will find a useful guide.

I have lately heard a person say, but do not know upon what authority, that the operation for tying the subclavian artery has been successful, but upon one side only. The first person who succeeded in this operation was Dr. Post of Philadelphia; he is no *post* (a laugh) though his name is Post, but an exceedingly clever, industrious surgeon.—Since this gentleman, several others have performed it, and the results favourable—a gentleman of the name of Liston is one—Mr. Bullen, of Lynn, in Norfolk, another—and you have lately seen a very successful one in the other hospital.

Mr. Keate, sen., the uncle of the present Mr. Robert Keate, performed the operation below the clavicle, and the first time he did so it wa completely successful; there may happen cases of axillary aneurism when the operation below the clavicle would be the best and safest, but unquestionably in ordinary instances that which I first described, viz., the one above the clavicle, is by far the most preferable. If, Gentlemen, you were asked what artery chiefly supported the circulation after the subclavian had been tied, your answer would be the superior scapular. The late Mr. Taunton, lecturer on anatomy, had in his possession an excellent specimen of natural obliteration of the subclavian

artery, and in this example the superior scapular had become very much enlarged.

Tying the Brachial Artery.

This artery very seldom requires to be secured, in consequence of aneurism; but it is often rendered necessary from other causes, such as wounds, and some of these wounds indeed, as in bleeding, give rise to aneurism. When an aneurismal tumour at the bend of the arm has been thus formed, let me recommend you not to cut down upon it in order to secure the vessel; rather tie the brachial artery at the middle of the arm, and not make an incision upon the swelling, at the middle of the elbow. To put a ligature upon the vessel here, amidst a mass of extravasated blood, is tedious, difficult, and dangerous. A young gentleman in the hospital bled a man, and in doing so penetrated the radial artery; 37 ounces of blood were lost before he could succeed in stopping it; in three days the pressure caused so much pain that the man requested it to be lightened; this was done, and the bleeding returned; at the end of the week one of the surgeons deemed it prudent to secure the vessel, and he did so at the part where the wound had been made; the operation took an hour in performing, and it was excessively difficult to find the vessel. On the following day there were much irritation and inflammation, and on the 10th day from the accident he died. When I was with Mr. Cline, about 40 years ago, one of my fellow-apprentices came up to me in a great fright, and said, "Lord! Cooper, what do you think I have done?" 'Something very bad, surely,' replied I, 'or you would not look so pale.'—"Why I have just been bleeding a man, and in doing so have punctured his radial artery." 'Well,' I said, 'is he in the hospital?'—"Oh, no, I have taken care of that, I bound up his arm as tightly as I could, and sent him away." In two or three days this man came back, and showed his arm to the surgeon, who, very properly, upon seeing what was the matter, made light of it, told him that a trifling operation must be performed, and in a few days he would be quite well. The man, upon hearing that he was to be again cut, would not consent, and left the hospital; as he was walking up Holborn, he happened to see the shop of a barber-surgeon, and in he went; this learned gentleman, after

having inspected the tumour, said that he would soon give him relief by letting out the matter with his lancet; well, he thrust in the instrument, and the moment he did so, out gushed a quantity of arterial blood; this so frightened the barber, that he rushed out of his shop, and left the poor patient to manage for himself; fortunately some person happened to be in the way, who bound up his arm, and brought him to the hospital; one of the surgeons put a ligature upon the artery, and the man ultimately did well.

In tying the brachial artery, there is only one circumstance of any importance to bear in mind, and it is this: the vessel is accompanied by the median nerve; now if you should include this in the ligature, it would either destroy the patient's life or cause paralysis of the limb. When you are about to secure the brachial artery, the direction for the incision is the inner edge of the biceps muscle, and this cut almost immediately lays bare the median nerve.

Tying the Ulnar Artery.

When this artery is required to be secured, what is the anatomical direction for the incision?—Why the tendon of the flexor carpi ulnaris: if you make your cut upon the inner side of this tendon, you will directly perceive the ulnar artery and ulnar nerve. This then is the part where the vessel may be most easily and safely tied.

Tying the Radial Artery.

What is the anatomical direction here?—the answer is, the tendon of the flexor carpi-radialis—cut upon the radial side of the tendon, and you will immediately find the artery close to its edge. Instead of putting ligatures upon these vessels at the wrist for aneurism, or wounds of the palmar arch, it has been recommended to employ pressure, by means of cork folded in lint, and bound down by a bandage. This practice, when used, leads to great inflammation and irritation—and I would advise you against using pressure generally, and more especially as regards the ulnar and radial arteries, as they can be so easily tied if you possess the least anatomical knowledge; and if you do not know anatomy you had better never touch the body at all.

On tying the Carotid Artery.

When this vessel is to be secured, it is desirable to make

the incision as high as you can; the upper boundary, therefore, will be the angle of the jaw, and below the omo-hyoideus: make your incision first, then high up, on the inner side of the sterno-cleido-mastoideus; upon drawing aside the edge of which you will distinctly see the omo-hyoideus obliquely crossing the artery. (Sir Astley here exhibited it in the dead body.) I have laid bare the carotid, and will now show you what you must principally take care to avoid in this operation, viz., the par-vagum, which accompanies the artery; if you were to tie this nerve you would endanger life; well, then, when you are about to pass the ligature round the vessel, if you raise it a little, you can readily discover whether the nerve be in contact with it, and thus guard against an accident which might lead to a fatal result.

I will now conclude the lecture by saying a few words on aneurisms from arteries of the scalp. The first case of this kind that I saw was sent to me by Mr. Toulmin of Hackney: in this instance I tied the artery proceeding to, and from, the tumour. If the aneurismal bag be not very large, you may cut immediately across it; apply a piece of doubled lint, then adhesive plaster, and over the whole a roller. If the swelling is small, that is, not larger than a walnut, adopt another mode, which is to make a circular incision completely down to the occipito-frontalis tendon. In this manner the connexion between the blood-vessels and the aneurism is destroyed; and, by applying a dossil of lint and strips of adhesive plaster, you speedily succeed in getting rid of the disease. I saw a case of aneurism of the posterior aural artery, and, for its cure, tied all the vessels which were leading to and from it. I should have done better by making, round the tumour, the circular incision that I have just described.

Medico-Chirurgical Society, and "The Lancet."

A meeting of this society has been lately held, for the purpose of enacting such laws and regulations as shall prevent the publication of any reports of its proceedings. The measures now put in force are, that every visitor shall be introduced by a subscriber; that his name be written in the visitors' book; and the member who introduces him be responsible for his conduct: and that a member be expelled, if ever discovered, for publishing any

account of what takes place at the Society's meetings. The circumstance which has given rise to this step is, that occasional notices of the proceedings of the Medico-Chirurgical Society have appeared in *The Lancet*. That the Society has a right to act thus cannot for a moment be doubted; but how far this proceeding is consistent with its own interest, or the object for which it exists, we shall now proceed to inquire. The Medico-Chirurgical Society of London ranks among its members nearly all the professional men of any talent or reputation in this metropolis, together with many other distinguished individuals in different parts of the country, as well as on the continent. The object which it professes to have in view, is the diffusion of knowledge. The means by which this is attempted to be accomplished, consist in holding periodical meetings, once every fortnight, excepting during the summer, when there is a vacation of four months; at which meetings papers on various professional subjects are presented by the members, read and discussed; and those that are accepted are published at the end of the year in the Society's Transactions. There is a collection of nearly all the works on medicine and surgery at present known, to which the members have free access: and so great is the liberality of the Society on this point, that the friends of members may also obtain any work they choose with very little trouble, merely by bringing a note from a subscriber. It is, however, respecting the publication of the proceedings which take place at the meetings that the Society shows so much jealousy, alleging as a reason, and, by the by, the only one, that giving any account of the papers read to the Society, before the *volume of Transactions* is published, will injure the sale of that work. This volume of Transactions is published towards the end of every year, to a copy of which each member is entitled, by paying his subscription.

We are very loth to speak of a body so respectable in the main as the Medico-Chirurgical Society in the terms which this proceeding, taken separately, deserves. In the first place, nothing can be more mean and inconsistent than for a body calling itself scientific, and professing to advance knowledge, to keep back facts which it may have in its possession, for weeks and months, in order to sell them at a somewhat better profit: in the next place, it is utterly impossible that the Society can derive the proposed pecuniary benefit —by the means it takes to accomplish this paltry purpose.

The Society must imagine that the facts which are stated at its periodical meetings are of some utility to the profession, and mankind; they must tend, if the Society be fit for any thing, to the preservation

of lives; to the alleviation of sufferings. Now let us conceive, that in this present month of January, some facts of this description are presented to the Society, and accepted by it; on the general application of which the saving of thousands of lives, of millions of pangs and throes of agonizing humanity depends, what could a stranger suppose, that this Society, full as it must be of humanity and erudition, composed of men mollified by the faithful learning of their ingenious art, would do in such case? Can there be a doubt? He would imagine that he saw the members breaking forth with tumultuous exultation—*qua data porta ruunt*, some at the front, some at the rear,—apothecaries and physicians, men-midwives and surgeons, dentists and oculists, licentiates and fellows, in most "admired disorder," to publish the glad tidings far and wide, and pour balm into the wounds of human suffering. He certainly would be a little astonished, if, instead of this, he saw the Society deliberately contriving to conceal the knowledge it had acquired till the end of the year, lest its profits might be diminished in its account with the bookseller. Really, Dr. Solomon, in all his glory, was not to be compared in meanness to this. We should be glad to know what is the worst feature of quackery, but a profligate contempt of the welfare of mankind, when put in the balance against the pecuniary interests of the medical practitioner? And what can be a more complete specimen of this than the deliberate suppression of useful knowledge? If the guilt of this disregard of public welfare be in proportion to the smallness of the advantage which the Society derives from it, the wretch who adulterates drugs and destroys a patient, that he might pocket a penny on a pill, would not be entitled to rank so high in enormity as this Society, if we supposed it to be fully aware of the consequences of its acts.

The members may equivocate with themselves; but there is little difference between the man who looks on and allows another to walk into a well, against which he could have warned him, and the man who would push the victim in. But it is not true, (and the conduct pursued is, on this account, the less excusable,) that the Society can reap pecuniary advantage from this desertion of their duty to their fellow-men. The proceedings of this Society are published, as we have said, towards the close of the year, in a guinea volume. The members of the Society get this volume, as a matter of course, on paying their subscriptions. On this part of the sale, therefore, the Society cannot lose by the previous notices of its proceedings. It is to be observed, moreover, that when the volume is printed, the So-

ciety cannot prevent medical journals, quarterly, monthly, or weekly; or the newspapers, if they please, from immediately treating the Transactions as they would any other work; —criticising its contents, or extracting its pith at their discretion. The journals, as matter of course, *do* make immediate and very full extracts from it.

Now, taking all these circumstances into consideration, how small, how invisible rather, must be the class of persons who can purchase the Transactions, and who would be deterred from purchasing them, if there were regular notices of the proceedings of the Society in our journal, or any other. Those notices would, of necessity, be brief, and not supersede the volume of the Transactions, in *libraries* at all, nor among ordinary purchasers, more than the reviews and abstracts published after the appearance of the volumes supersede them at present. The effect of the notices in preventing the sale of the volume must be among that class of men who, *not* being *members* of the Society, would have been satisfied by the brief notices which we should have been enabled to give; and who, in spite of a stomach so easily satisfied, are yet, at the present time, so hungering and thirsting after the knowledge of the novelties of the Society, that immediately on the appearance of the volume, and without waiting for *Dr. J. Johnson's* or *Dr. Copland's* next number—or even for the *Saturday's Lancet*, rush with their guinea to the bookseller's, to purchase the volume, so slight an anticipation of the contents of which (on the supposition) would have palled their curiosity. Why, certainly, there is not in London *one* such *medico*-psychological curiosity as we have just described. There is not in the medical profession, we are sorry to say, a disposition for knowledge ready to purchase so slender a gratification at so expensive a rate.

The notices which the Society forbids we are persuaded have a directly contrary effect; they would afford an additional stimulus to those who present the papers, by holding forth a more immediate and extensive circulation for the communication of any useful discovery. Other societies, particularly the Royal Society, allow accounts of their proceedings to be published, being fully convinced that it must be a benefit to any body possessing intrinsic merit, to have the public eye directed towards its proceedings. We have additional arguments that we could advance on this subject, but our limits will not allow us to say any more at present; as long, however, as the measures which we have been reprobating stand unrepealed, we will never fail to take every opportunity of exposing the meanness and inconsistency of the

Society in this point to public odium and scorn.

The information respecting the proceedings of the Medico-Chirurgical Society, which has been communicated to the profession at large, in *The Lancet*, has been obtained from persons belonging to that body, who, though they do not possess sufficient firmness to bear the brunt of the opposition of particular members of the Society, if they were discovered, (and it would be imprudent, perhaps, for them to do it,) still have the discernment to know that the publication of the proceedings of the Society must have a beneficial tendency, by giving extensive and speedy circulation to useful facts, and also by exposing the ignorance of some and exalting the reputation of others.

Jan. 11*th*, 1824.

ITALIAN AND ENGLISH SYSTEMS OF MEDICAL INSTRUCTION.

Letter of Dr. Clark, M.D. of the University of Edinburgh, to Professor Tommasini, on his Observations with respect to the Clinical School at Edinburgh (Effemeridi Letterarie di Roma, t. 6. p. 85.) Letter of Professor Tommasini, in reply to the Letter of Dr. Clark (Effemeridi Letterarie di Roma, t. 7. p. 1.)

[From Omodei's Annali Universali di Medicina.]

If the system of Medico-Clinical instruction in Italy be not the most perfect of all, it is certainly not inferior to any at present adopted in the most cultivated nations of Europe. We were confirmed in this opinion by a discourse pronounced, a short time since, in the Clinical School of the University of Bologna, by Professor Tommasini, and by the answer of this distinguished professor to Dr. Clark, of the University of Edinburgh.

Professor Tommasini sent to Dr. Clark his *Discourse on the Medical Establishments of Great Britain*, requesting him to give a candid opinion on that production. Dr. Clark, in his reply, declares that the opinion of Professor Tommasini, as to the system of Clinical instruction in Edinburgh, is incorrect, and that he would have thought differently of the present state of medical science in England, if he had been acquainted with the writings of many medical men, from which it appears, that although they derive their practical knowledge of disease from observations of each particular case, they are nevertheless sufficiently disposed to generalize their ideas, both as to the nature of diseases, and the methods which should be adopted for their cure. Dr. Clark maintains that the Medical Professors of Edinburgh do not confine themselves to the mere indication of symptoms, and medicinal formulæ, but that they endeavour to ascertain the nature of diseases, by a strict examination of symptoms to form a correct prognosis, and to point out such remedies as are calculated to restore the health of the patient. Dr.

Clark admits that the students do not receive instruction by the bed-side of the patient; but he contends that this system of instruction is injurious to the sick, and inconvenient to the student himself—in which latter opinion, he observes, that he is confirmed by Professor Frank, of Wilna. The method of Clinical instruction adopted at Edinburgh is, according to Dr. Clark, more opposed than any other to superficial acquirements, since it obliges the student to hear the instructions of many professors, to follow them to the bed-side of the patients, and learn the method of treating each case. The students are obliged to write down, in the presence of their colleagues, the history of every disease to which they are called;—these histories may be consulted and examined by the other students, and the professors make appropriate observations every three months upon the cases which occur in the hospitals. By such observations, Dr. Clark imagines he has proved that the plan pursued in the Medical School at Edinburgh is not only not superficial or defective, but superior to any other adopted in Europe.

The professor of Bologna, in his reply to Dr. Clark's letter, contends that the system of medical instruction adopted in England is not, generally speaking, preferable to the Italian system, and that the reasons on which his opinion is founded are distinctly stated in his Latin Discourse, presented to the Medico-Chirurgical Society of London. In the first place, Professor Tommasini insists upon the necessity of distinguishing what may be essentially different in two cases of disease, though the symptoms may be apparently the same, and what in different cases may be similar and identical. For example, the English in treating colic, convulsions, asthma, tetanus, &c., attend only to the symptoms of the disease, and the remedies indicated by those symptoms, without considering the morbid diathesis upon which the mode of cure chiefly depends; so that in one case stimulating medicines, and in another blood-letting and debilitating remedies may be required; and the theories upon which such distinctions are founded, are the necessary results of numerous and well-observed facts.

Professor Tommasini proceeds to observe, that he is not unacquainted with the works of English medical writers, which have essentially contributed to the advancement of the science; and in proof of this, he refers to many which appear to have escaped the notice of Dr. Clark. But accurate researches, and new maxims in pathology and therapeutics, as deduced from correct observations, have no influence on the state of general knowledge in Great Britain, nor indeed is much value set upon them. The doctrines of Brown and Cullen are neither

adopted nor refuted by English physicians, who differ greatly in this respect from their Italian brethren, whose great object it is to explode erroneous systems, by proving their fallacy,—to establish true pathological principles by accurate investigation, and to apply these principles to therapeutics, as far as possible, in all cases of difficulty which may arise. Professor Tommasini compares the practical works of Borsieri and Professor Frank with the commentaries of Heberden, *De Morborum Historia et Curatione*, and with the practical work of Thomas. In the latter, the medical student finds no directions in doubtful cases —no reasons for preferring one mode of treatment to another; in the former, the essential differences of diseases, in cases apparently similar, are accurately distinguished, and different modes of treatment, founded upon just and sound reasoning, are proposed and recommended according to the nature of the case. Though many English medical works are extremely valuable and useful to advanced practitioners, they cannot be so to those who are just entering upon the study of medicine. To prove the truth of this remark, Tommasini enumerates many modern works; among others, Raven's *Observations on the Use of Tincture of Colchicum in Hypochondriasis and Hysteria*; Gaitskell, *On the Use of Nux Vomica in Paralysis and Apoplexy*; Jutliffe, *On Opium in the Cure of Tetanus*, &c. In none of the above-mentioned works are the essential conditions of these diseases noticed: the circumstances are not stated in which the proposed remedies may prove injurious; or if any cases are found not to agree with their general observations, no attempt is made to ascertain the reason of these differences. It appears, therefore, that as the Italian pathology has already derived more benefit than the English from the great works of celebrated English medical writers, such as Sydenham, Cullen, Brown, Gregory, Hunter; so it is likely to reap more profit than the English from modern English discoveries and inductions, as far as regards the formation of a system of medical science and pathology, which may be practically useful to the younger members of the profession.

Professor Tommasini proceeds to show that his opinion coincides with that of many celebrated medical men who have visited England. Signor Flajani assures us that he found the practice of medicine in England in a completely empirical state;—that no system was observed; and that no reliance was placed on any thing but observation and experience. M. Broussais has given the same opinion of English medicine, in his examination of medical doctrines, and of the systems of nosology. Dr. de Salle observes, that mercury is much abused in England, and that many medi-

cines of opposite characters are indiscriminately employed in the same disease. M. Roche laments that the physicians of Great Britain, relying entirely on active medicines, publish confused and imperfect observations, give no reasons for facts, and make no distinction between the essential conditions of diseases and the essential effect of medicines, so that the readers or pupils can derive no benefit from their works. Not only are foreign physicians of this opinion, but many enlightened English practitioners censure the empirical mode of practising physic in their country, and agree that the effects of medicines can only be correctly ascertained by following the principles adopted in many parts of Italy.

Professor Tommasini considers the method of Clinical instruction adopted in Italy superior to that of the English. The student in Italy is obliged to attend daily in the hospitals, where a certain number of beds is assigned to him, and he is thus enabled to observe the symptomatic and nosological diagnosis of the disease, to form a correct prognosis of the result, to point out a suitable method of treatment, to note the different changes which may take place in the state of the patient, whether favourable or unfavourable, and to report the results. The patient, when the severity of the case may require it, is visited frequently in the hours between the regular morning's and evening's visit, that the progress of the disease may be minutely watched. Every observation is noted down in books, appropriated to this purpose, which may be examined, and copied by all the students; and by this means copious materials are formed for the history of the disease, which may be preserved in the records of the Hospital.

This method does not in any way disturb the patient; on the contrary, he appreciates the assiduous care which is taken of him, and feels that it is best calculated to effect his cure. Besides, it is only at the bed-side of the patient that the student can obtain an accurate knowledge of the character and features of disease, and ascertain the symptoms which indicate the danger of the patient, and the probable result of his case; it is for this reason that the school has obtained the name of Clinical. But if a long examination is likely to annoy the patient, the professor and student retire to discuss the case, and consider the nature and effect of any changes which may have taken place. The examinations at the bed-side of the patient are made without noise; and as the prognostic is discussed in the Latin language, which is seldom understood by the patient, his mind is not likely to be affected. The number of patients cured by pupils is not very small, as Dr. Clark suspects, each pupil having cured nine or more in the last year. Besides this, the

Students may attend patients, and compile cases in other wards directed by able practitioners, visit the wards of Clinical surgery, attend lectures on the application of pathology to practice, and the Medico-chirurgical Institutions. They are not therefore restricted to hearing the doctrines of a single master, venerated, as Dr. Clark fears, as an oracle of the art. In the intervals of their attendance on the sick assigned to them, they may observe cases assigned to their fellow-students, and this they do with much anxiety, as they are liable to be called to a consultation, and must then give their opinions upon the disease, and on the proper mode of treatment. Twice a week the Professor gives a Clinical lecture to the assembled Students, in which he directs their attention to the most difficult cases which have occurred in the Hospital, analyzing the disease in every case, whether it is still in progress or has terminated favourably or fatally. In the latter case the dissection of the body either confirms the prognosis which was formed, or serves to correct the practitioner's idea of the nature and seat of the disease; and by this means the Students acquire experience, and are enabled to treat diseases with success themselves.

For these reasons, Professor Tommasini contends, that the English system of medical instruction is not preferable to that practised in Italy, the former being especially defective with respect to the Therapeutic directions at the bedside of the sick. To prove that the method of clinical instruction in Edinburgh is less beneficial to the Student than that adopted in many Universities of Germany and Italy, Tommasini further cites the authority of J. Frank, R. Humton, M. D. of London, Professor Clark, of Cambridge, Professor Stevat, Dr. Brabant, and Professor Heberski, of Wilna. He concludes his letter to Dr. Clark by transcribing a passage from Dr. Morgan's remarks on the state of medicine in Italy, in which, to the honour of the Italian Clinical schools, it is stated, that the method observed in the school at Bologna forms a more complete system of medical instruction than he had seen practised in any country, and was greatly superior to that adopted in the Hospitals of England.

MIDDLESEX HOSPITAL.

Case of Cancer of the Mamma.

Mary Bacon, ætat 47; blue eyes, dark brown hair, and fair complexion. This woman came to the hospital on the 31st Dec., to ascertain the opinion of the surgeons, on an affection of the right mamma, and to submit herself to an operation, in case that measure should be thought requisite. Upon examination, the nipple was found slightly puckered and retracted, the

areola of a livid hue, but without any observable discoloration of the surrounding skin. She began to conceive at the early age of sixteen, and has been the mother of *nineteen* children born alive, all of whom she has suckled for a longer or shorter period. At present she has nine children living, the youngest being six years old. The catamenial discharge has always been regular, and ceased about six months ago, since which her general health has been tolerably good. From all we could learn, it does not appear that any predisposition or diathesis either to scrofula or cancer has been derived from her parents. She attributes the origin of the disease to a blow received on the breast twelve months ago, followed by inflammation and swelling; which symptoms were in some degree relieved by leeches, cold applications, and other remedies, which, for the last six months, have been discontinued, and a cold bread and water poultice substituted.

It should have been observed above, that on examination, two portions of schirrus, each the size of a shilling, were distinctly felt about an inch from the nipple on the sternal and brachial sides. The patient was in consequence admitted into the cancer ward of this hospital, and an early day fixed for the operation, which was performed on the 2d of January, in the following manner:

After distinguishing carefully the extent of the morbid affection, an incision was commenced on the brachial side, in a line with the nipple, and carried downward, till the knife made a point, directly opposite, on the sternal side, describing a segment of a circle in its course. A similar incision was then made in the same direction on the superior side of the nipple, which, when completed, gave the whole the appearance of a circular spindle, the longest diameter being about four inches, and the middle diameter three inches. The nipple forming the centre at which the two lines would bisect each other.

The gland was then clearly dissected away from the subjacent muscles; great care being taken that no morbid or indurated part remained; one small artery was tied during the operation, and after the part was removed, it was found necessary to take up four or five others. The edges of the wound were then brought together by adhesive straps, over which a little simple dressing and lint were placed, and the whole kept in the proper situation by a compress and roller. After the operation she had

℞. Tr. Opii. m. xxx.

Mist. Camph. ℥ iss. fiat haustus.

Jan. 3d.—Passed rather a restless night; pulse 92, and soft; tongue clean; her bowels have not been open since the operation; a very slight degree of feverish irritation is observable.

R. Ol. Ricini unciam statim.
Liq. Ammon. Acet. ℥ ss.
Vini Ipecacuanhæ m. x.
Mist: Camphoræ ℥j fiat haustus ter die sumendus.

4th.—Pulse 88, fuller; tongue clean; bowels open twice; skin moist; slept last night tolerably well; dressings removed; wound looks healthy. Continue the draughts as yesterday prescribed.

6th.—Pulse 86; tongue clean; bowels regular.

8th.—After a good night's rest—pulse 86; tongue clean; skin moist; and bowels regular. Adhesion has taken place through some extent of the wound—a small quantity of healthy pus is discharged through the ununited parts. The same medicines were continued, and from this period the patient rapidly recovered.

The operation was performed by Mr. Bell.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

To the Editor of THE LANCET.

MR. EDITOR,—By way of prelude to my future operations, I shall lay open the short history of the Institution, the name of which stands at the head of this paper. Many, perhaps, of your English readers may have never so much as heard of this establishment, the members of which, with the exception of a few, are not over-solicitous about what is called making a noise in the world. Perfectly content with the profits of their profession, they are not troubled with a "longing after immortality." The rest of the medical world they look upon as a sort of *Jackal*, formed for their use; but they have no idea of quitting the old *lair* of routine and custom, in quest of enterprise and discovery. If others have the labour of invention, the advantage derived from putting in practice what is new satisfies their ambition. Alive only to the impulses of self-interest, they seem to borrow the tone of their character from the heartless rapacity and monotonous scene of desolation by which they are surrounded, for here there is but one struggle between the avarice of the aristocracy and the poverty of the people. It is no wonder then, that men who aspire to belong to the former class of individuals should be found deeply tinged with their vices. But to resume the proposition with which I commenced: As late as the year 1806, the proceedings of the Royal College of Surgeons in Ireland, which was first chartered in 1794, were conducted in an out-house, situate in the midst of a scene of matchless misery, at the rear of Mercer's Hospital, in Stephen-street. The concern at that period, although proportionate to the existing wants of the Society, was upon a small scale, being principally confined to one apartment, which served the two-fold purpose of a lecture and dissecting room. A few seats of plain pine, tem-

porarily put together, without even the embellishment which the painter bestows on those occasions, accommodated the limited audience, while they were separated by this means from the "High Priest," who officiated in the centre. 'Twas here in a noon-day twilight, when the sun's rays were entangled in the meshes of inviolable cobwebs, or excluded by the impenetrable dust of the windows, that DEASE, whose bust of "polished Parian" now presides, in the majesty of contemplative attitude, over the treasures of the New Museum, was wont to give his "little Senate laws." 'Twas here, in the midst of crowded and crumbling ruins, that Irish surgery drew its first breath, and afterwards issued forth in the person of Professor Halohan, swaddled in native *frieze*, and with one spur to stimulate his Rosinante, to the great delight of the citizens. Such was the origin of the subject of the present memoir — an Institution, nurtured in the lap of filth; but which now basks in the sunshine of at least Irish popularity.

Here then let oblivion for ever rest upon the old establishment, and the obscurity of its birth; henceforward we shall only speak of a neat little structure which suddenly arose upon the site of the Quakers' burial-ground, at the corner of York-street, Stephen's-green. On the 17th of March, 1806, the usual ceremony of laying the first stone was performed by the Lord-lieutenant; and as it now stands it reminds one very strongly of the appearance of these people, whose relics it has sacrilegiously supplanted; it looks for all the world like the genius of Quakerism personified in stone. Solid and substantial, no gewgaw of the Sculptor's art disfigures the simplicity of its style. With a façade of six pillars of Portland stone resting upon a basement of mountain granite, and supporting a cornice terminating in an angle at top; it stands the pride of Irish surgery, and the terror of many a candidate, whose fate often depends upon its decrees. Nothing can be more elaborately finished than the mere architectural appointments of this building—it is securely slated—accurately glazed—the doors are chinkless — every thing in fact wears the look of comfort and prosperity—while a flight of steps, by which we are just about to ascend to the front entrance, proclaims by their unsullied whiteness, that few have access to this MANSION OF CORPORATE EXCLUSION. Would that the soul which should animate this structure were equal to its architectural excellence! But the proverb says, that "Corporations have no spiritual appendages," nor does this establishment promise to impugn the veracity of the adage. Having gained admission, our attention is divided between two objects, a hall, which with a little more elevation would be

grand, and a gentleman in black, with snowy temples—raven voice—and a *wild Irish* physiognomy—who perambulates here with an air somewhat unsuited to his avocation. This is no less a personage than Sir P—r C—y, the clerk of the College—a bustling, restless, talkative sort of being, who derives his titular baronetcy from his politics, which are ultra tory. Ah! Sir P—r, you little thought when last we saw you *crossing* your forehead, and *smiting* your bosom behind a poor papist's back, that we would chastise you for your tricks; but we respect your better qualifications, and will only laugh at your foibles. The remainder of the furniture of the hall is easily disposed of; it consists of a bust of George the Third, (a type of our loyalty,) and opposite to it, where the stairs commence, rises, of gigantic dimensions, a cameleopard, the present, I believe, of one of your countrymen, to the members of this Institution. On this floor is the library, containing an excellent collection of books, destined, as it would seem, for the worm and not the student, as the place is only accessible in company with a member or a licentiate. A hard case to be sure; "*Sed, quid ego, hæc autem nequicquam ingrata revolvo.*" For brevity sake, then, I will suppose that we are together in the museum, which, if report says truth, eclipses all other repositories of this kind, in the number, rarity, and excellence of its anatomical preparations, and specimens of morbid anatomy. It consists of one apartment, about the size of an ordinary bed-chamber, with one window to supply it with light. This trifling inconvenience could be easily got over, if persons were admitted there: but, like the books underneath, it is kept more for ornament than use. It would be a superfluous task to enumerate the contents of this place; they are just such as are always found in similar places, and only valuable in proportion as liberality extends the means of studying them to advantage. Adjoining the museum is the board-room, where the examinations are latterly held. At each end of this splendid apartment there are two full-length portraits of Doctor Renny and Surgeon Kenthorn, vying with each other in brilliancy of carmine, and pomp of gilding. What endowments of the mind, or charms of the person, could have induced the *pictorial* muse to exhibit thus their forms to the admiration of posterity I cannot say, for neither one nor the other has left, or is likely to leave, any memorial that would justify the presumption of appearing on the canvass.

If such be the models which the college proposes for the imitation of its future members, it will not be difficult for them to come up to those standards, who have so easily earned an oil-and-colour im-

mortality.—Patience for one moment longer, and the *topography* of our sketch is finished. Distinct from all we have been describing are the anatomical concerns, and the theatres of the professors—all well arranged and convenient for their size. The anatomical theatre is said to be capable of containing 800; four, I believe, would be nearer the truth. Behind the part appropriated for the students is a gallery intended for the public to witness the dissection of malefactors; but they have no chance of admission now; the doors, which were on the outside, being hermetically sealed with brick and mortar: lest I suppose the back-bone of a whale, that sleeps there in venerable dust, should escape to his natural element. But the bell rings—Mr. C.'s carriage is at the gate—the benches fill—confusion in all its fantastic forms of juvenile levity prevails throughout the scene. The whole artillery of confectionery, from *canister* lozenges to the heavy *grape* shot of spice nuts, is flying on all sides—while other aspirants for anarchial reputation eagerly contend for the aromatic ammunition. On another side, some musical amateur amuses the audience with the fashionable song or quadrille of the day. Thus every one contributes something to increase this scene of unphilosophical tumult. Here I must cease—the folding-doors open—and in hurries Mr. C—— with a slip of paper, twisted round his *index* finger—a simultaneous burst of applause greets his welcome entry; but modestly declining the honour intended him, he instantly proceeds, without even returning the salute, "Gentlemen, at our last meeting," &c. &c.—When we meet again, we shall consider the remainder of the performance.—Adieu.

ERINENSIS.

LECTURE XXIII.

ON HYDROCELE.

I INTEND, in this evening's lecture, to describe to you *Hydrocele*.

Hydrocele is an accumulation of water in the tunica vaginalis testis; the anatomy, therefore, of those persons who say that the fluid is contained between the tunica albuginea and the tunica vaginalis is exceedingly faulty. Such a description is entirely false; and I scarcely need tell *you*, Gentlemen, that the water is completely enclosed in the cavity of the tunica vaginalis. If the question were put to you, where is the water situated in hydrocele? the answer would be what I have just stated; and if you gave any other, it would be directly perceived that your knowledge of the anatomy of the part was but

imperfect. The situation of the water in hydrocele is precisely similar to water in the pericardium; and what should we say of the man who would assert that this water was contained between the pericardium and heart? Why, Gentlemen, we should feel assured that he was entirely ignorant of the matter, for water in the pericardium is situated distinctly within it: and so is water in hydrocele completely within the tunica vaginalis.

Hydrocele is a generic term, and a multitude of tumours have received this appellation. It is now, however, usually confined to two; I should, therefore, say that hydrocele is of two kinds: viz., 1st, of the tunica vaginalis; and 2d, of the spermatic chord.

Hydrocele of the Tunica Vaginalis.—Well, then, of hydrocele in the tunica vaginalis:—The swelling at first shews itself at the lower part of the testicle, and gradually rises till it arrives at the abdominal ring; is of a pyriform shape; largest two-thirds of the way downwards; a little less at the bottom; and smallest at the ring. The common formation of hydrocele is unattended with pain, excepting, however, in those cases where it has been the result of inflammation; but generally speaking, there is no pain, and the patient accidentally discovers the existence of the swelling, and often not until it has arrived at considerable magnitude. Commonly, there is no redness of the scrotum—no discoloration.

The ordinary situation of the testicle in hydrocele, is two-thirds of the way down the tumour, at the posterior part. Here, I say, is its usual situation: but in this respect it sometimes varies, as I shall presently show you. In performing the operation for hydrocele, it is of the utmost importance that you should have an exact knowledge of the situation of the testicle, for ignorance in this respect has often led to its being pierced by the trocar. You can easily discover the position of the testicle by a careful examination of the swelling, and by squeezing it with some degree of force at every part. When you press upon the testicle, you will find that part of the tumour more firm; the patient will manifest much uneasiness, and complain that you give him a good deal of pain: in this manner, then, you can readily discover where it is situated. The weight of the tumour is but little (this of course means comparative-

ly); when you lift it, you will be astonished at its lightness, which will at once convince you that it is not a solid substance. The next thing you notice is, if the part be not very much distended, that the swelling will be moveable, *i. e.*, if you firmly grasp it at its base, the fluid will ascend, and the tumour increase at its upper part; therefore, its lightness, mobility, form, freeness from pain, and the history of the case, constitute its distinguishing characters from other diseases. But there are two other marks by which the disease may be known, one of them decisive, and the other nearly so: these are, 1st, its sense of fluctuation; and, 2d, its transparency. I have just told you, that if you press upon the lower part of the swelling, it would decrease there and increase at the upper part; fluctuation at this time becomes evident to those who are accustomed to such examinations. Its transparency, or rather its semi-transparency, may be discovered in the manner I shall presently explain to you. This characteristic feature has been denied; I have certainly seen the tunica vaginalis so much thickened in very old cases of hydrocele, and in persons who had long resided in hot climates, that the examination required nicety and caution; but still a little art, as I shall presently explain to you, will enable the surgeon to form a correct diagnosis.

Well, then, such are the common marks by which you distinguish hydrocele; but there are other varieties, and these I will mention to you: 1st, the water of hydrocele sometimes forms *two* swellings: I have before told you that the shape of the tumour is usually pyriform, and that the water gradually rises till it arrives at the abdominal ring; now, in this variety of two swellings, a portion of the water collects above the ring, giving rise to a tumour there; thus a swelling is formed above and below, the narrowest part being at the ring. A surgeon unacquainted with this circumstance, upon looking at such a case would say, "Oh! this is not hydrocele, but hernia," and he would be strengthened in that opinion by seeing the upper part dilate upon coughing, in consequence of the impulse that it would receive from the contraction of the abdominal muscles. Its transparency and lightness, however, would readily enable him to distinguish this complaint

from hernia. Why, this very day, a gentleman came to me under the following circumstances: when he came into my room, he informed that he had been twice tapped, and that he did not think the operations had been well performed; I looked at the swelling, and found that it extended to the abdominal ring: I examined the part very carefully, and requested him to cough; the moment he did so, the swelling was evidently forced down; well, said I, this may be hydrocele, but I shall not tap you; I requested a candle to be brought; no transparency was observable; I desired him to lie down upon the chairs, when I found it to be hernia, and reduced it. This, then, shews how cautious we ought to be in such cases, before we introduce the trocar, for I might have been misled by the history of this case, and proceeded at once to have performed the operation of tapping; had I done so, in all probability the trocar would have passed into this gentleman's intestines. It was a hernia which had succeeded hydrocele.

Another variety met with, is that in which a fluctuating swelling will remain, after a considerable portion of water has been removed. The first case of this kind that I saw, was sent to me by Dr. Chester, and Mr. Roberts, of Gloucester. The patient had been nnder the care of those gentlemen, and had been tapped for hydrocele; a quantity of water was drawn off, but still a swelling remained. He was sent to town for me to see him, at which time the hydrocele had become nearly as large as before. Upon hearing the history of this case, the impression upon my mind was, that when the operation for tapping had been performed, the operator had let the canula slip out of the tunica vaginalis, which circumstance, I thought, had led to the retention of a portion of the fluid. Well, believing this, I passed in the trocar and canula myself; some water came away, but not all; this struck me as being very strange, for I had taken great care to keep the end of the canula within the tunica vaginalis. I examined the remaining swelling; found fluctuation; then tried it with a candle, and saw that it was transparent. Well, Sir, I said, this is water now; introduced the trocar again, a little way from where I did at first, and off it ran. The fluid in the

second instance had nothing of the yellow appearance of that which is drawn off in hydrocele, but on the contrary, was as clear as water.

I have before mentioned to you, that the testicle in hydrocele is commonly situated at the back part, and two-thirds of the way downwards. Here, however, there is great variety, and it is even sometimes found in front. I will tell you how this happens. The person is attacked with inflammation in the tunica vaginalis, before any collection of water has taken place; adhesive matter is thrown out, probably at the fore part, which occasions permanent adhesion between the middle and outer coat of the testicle: should serum be secreted after this, of course it would be lodged at the sides and posterior part. What would the consequence be, if, in such a case as this, the trocar were to be introduced in the usual situation? Why, that it would pass into the testicle. A gentleman of great importance in this town consulted his regimental surgeon for a swelling in the scrotum; it was pronounced hydrocele. The operation of tapping was resolved upon; but when the trocar was introduced, it passed only into a solid substance, and no water came away. The surgeon stared, and said, "Sir, I am a little mistaken in this case; you have a diseased testicle here, instead of hydrocele, as I at first supposed, and it is necessary that the diseased part should be removed." But the gentleman, being a young man, did not think it would add much to his enjoyment to lose a testicle, (*loud laughter,*) and thought that it required some hesitation before he resolved upon such a measure; consequently he did hesitate, and the result was, that he consulted another surgeon. Upon examination, the testicle was found at the fore part of the swelling, and the fluid at the sides and bottom. Whilst taking off his clothes, some copper-coloured eruptions having been seen, he was asked if there was any enlargement of the bones; when the right tibia was found considerably swollen. He was put under a course of mercury, for these secondary symptoms, which soon got well. The hydrocele still remained, and as the surgeon who first saw this case was right in his first opinion as to its nature, he was sent for to repeat the operation of tapping. He now introduced the trocar at the side of the swelling, instead of the fore part; the water was

withdrawn: and the patient perfectly recovered. This case shows the necessity of extreme caution in determining the situation of the testicle before the introduction of the trocar.

The testicle is sometimes found at the bottom of the swelling. Now (holding up a preparation) here is a curious thing. This hydrocele, you observe, was situated between the testicle and abdominal ring, the testicle being quite at the inferior extremity of the tumour. Adhesive inflammation, in this instance, had completely united the middle to the outer coat; consequently, the descent of the water had been prevented.

Here is another preparation, in which the water had collected at the sides, adhesion having taken place both before and behind.

Here is another preparation, in which it appears as though the hydrocelic sac had arisen from the tunica vaginalis, in the same manner as an aneurismal sac is occasionally formed from the coats of an artery.

In hydrocele, it sometimes happens that the fluid is formed in a distinct bag or cyst, between the tunica vaginalis and tunica albuginea; this complaint is usually combined with common hydrocele.

There are great varieties with regard to the state of the tunica vaginalis; and it is found much thicker in those persons who have for a long time resided in hot climates, such as the coast of Africa, or West Indies, than in such a climate as our own. When, therefore, you find a tumour about the testicle, apparently solid, but of little weight, you are to be very cautious in your diagnosis: you are somewhat called upon to explore the swelling with a lancet; that is, puncture it slightly where there is the most appearance of fluctuation; and often, when least expected, the testicle will be found in a healthy state.

After the water has been discharged, it frequently happens that the tunica vaginalis, in consequence of its extreme thickness, will remain in large folds.

The tunica vaginalis has, in a few instances, been found ossified. Mr. Warner, formerly surgeon at Guy's, met with an example of this. There is a similar preparation in the museum at the other hospital, which any of you might see by applying to Mr. Stocker. Mr. Beaver, formerly a student here, accidentally discovered a case of it in our dissecting room.

Then, with regard to the

contents of hydrocele, it is usually yellow serum. But sometimes small cartilaginous bodies are found in the fluid; when these are seen, they prove that the hydrocele had existed for a very long time, and are always proof of its age.

There is another variety which I ought to mention here; it has been called the *Congenital Hydrocele*, in consequence of a communication having from birth existed between the tunica vaginalis and cavity of the abdomen. When the parts are natural and perfect, there is no opening leading from one to the other, as you know; but occasionally the natural closure does not take place, and then a fluid may descend from the abdomen, and collect in the tunica vaginalis. In this manner, sometimes from ascites, the scrotum will become greatly distended; and here, in such cases, is the best situation for tapping. The hydrocele of which I am now speaking may be readily discovered from any other, in consequence of your being enabled, with ease, to return the water into the cavity of the abdomen: this you can effect by placing the person upon his back, and then elevating the scrotum. The first case of this variety of hydrocele that I saw was sent to me by Mr. Dobson, of Harrow. The patient being a very young person, I was apprehensive of peritoneal inflammation, if I injected; it occurred to me that I might succeed in shutting up the communication with the abdomen by means of a common truss, when I might afterwards safely tap and inject for the radical cure. A truss was accordingly applied over the ring, and ordered to be worn for two years; at the end of one year Mr. Dobson wrote to me, to say that the lad was quite cured. Now this I did not expect. What had happened was this: the pressure of the truss had succeeded in destroying the communication between the tunica vaginalis and abdomen, and then the water had become absorbed. I advise you, should you ever meet with such a case, to pursue a similar practice; for, as you see in this case, the opening which exists may be closed, and if the person's health be good, the water may be absorbed, thereby rendering an operation unnecessary. The result of that case gratified me exceedingly.

Diagnosis.

Now then as to the *best* mode of distinguishing hydrocele:—When a patient comes to you with a fluctuating swelling in

the scrotum, in which the testicle is enclosed, you order a candle to be brought; then squeezing the tumour at the posterior part, you distend the front so as to make it tense; apply the skin of the little finger, and that covering its metacarpal bone at the outer side, to the surface of the tumour, and then cause the candle to be held as close as possible opposite to where the two skins meet. In this way you will never fail to discover the transparency of hydroceles which are formed in this climate; and it is only the clumsy, awkward mode in which the experiment is made, that occasions any person to be unsuccessful in it, which, if conducted differently, would lead to a satisfactory result. I have seen individuals, however, from Sierra Leone and the West Indies, in whom the tunica vaginalis had become so much thickened as to render the hydrocele perfectly opaque.

Diseased testicle may be easily distinguished from hydrocele by its weight and flatness, and the pain and sickness which it occasions; and often by the discoloration of the skin covering it, and by the semi-transparency and lightness of one tumour and the heaviness of the other.

There is one disease somewhat difficult to distinguish from hydrocele, viz., hæmatocele: this is a collection of blood in the tunica vaginalis testis, and produces in form an exactly similar tumour to hydrocele; but the history of the case is quite different, and your best guide. If you ask how it happened? the answer is—"Why I was riding, when the horse, becoming restive, began to plunge, and threw me forward on the pommel of the saddle; I soon afterwards discovered this swelling." Then, if you inquire whether there were any marks or bruises in the skin of the scrotum, the answer will be, "Oh, yes; it was black and blue." Whenever you find a swelling thus suddenly formed after a blow, having the figure of hydrocele, you may be certain of its being blood. But, Gentlemen, guard against mistaking this complaint for diseased testicle. I was once present in the other hospital when a healthy testicle was removed, owing to this error; and some years since, one of the first surgeons in this town, after having removed a tumour from the scrotum; and when the gentlemen were leaving the theatre, desired them to wait a moment, and he would show them the disease of the testicle.

However, upon cutting the part open, the great bulk proved to be blood, and the testicle was in a perfectly sound state. Such an unfortunate occurrence as this a man must for ever lament.

The cause of hydrocele appears to depend upon increased secretion, as the vessels are dilated, though there is generally no inflammatory action.

Inflammation of the testicle will give rise to hydrocele; for as the inflammation disappears, hydrocele forms. This can generally be removed by exciting absorption; for which purpose give the Pil. Hydrarg. Submur. Comp., and apply to the scrotum a lotion composed of the Liq. Ammon. Acet., having dissolved in it some of the Ammon. Mur. These means will be found to have considerable influence in this hydrocele, which results from inflammation; but in the other they have none.

Hydrocele, if left to itself, will often undergo spontaneous cure. A man was brought into the other hospital with a sloughing of the scrotum, a consequence of an inflammation occasioned by a hydrocele; the water was, in this case, discharged by a natural process, and nature performed a radical cure by effecting a permanent adhesion of the parts.

I shall conclude this lecture by describing to you the *palliative* treatment of hydrocele, reserving what I have to say on the *radical* or *curative* treatment until we next meet.

When persons are afraid of the curative treatment, or when it would be attended with inconvenience, as also in old people, the palliative will be demanded. It is a very simple operation, and one which any person can perform. Remember that the testicle is usually two-thirds of the way downwards at the posterior part; introduce, therefore, the trocar in the fore part obliquely upwards, indeed almost perpendicularly, to avoid wounding the testicle; but as I have before shown you that the testicle occupies different situations in the tumour, you cannot introduce the trocar with safety until you have ascertained the precise spot where the testicle is lodged, and then you will of course take care to avoid it. Let me observe, that whether you perform the operation for the palliative or curative treatment, withdraw the trocar the instant you believe that the canula is within the tunica vaginalis: and once having the trocar in, take care to keep it

there until the operation be concluded; and the most effectual way to do this is by grasping the tumour at the posterior part, so as to keep it tense where the trocar entered. I generally use a trocar and canula of small size. Some persons recommend a lancet and probe to be employed; it is mere nonsense: if they had ever performed the operation, they would not do so. Such suggestions can only emanate from people who are destitute of experience and knowledge.

If you wish to accomplish this operation bloodlessly, to prevent internal bleeding, and the formation of hæmatocele, keep the patient, at the time you are doing it, in the erect position. There is no necessity for any after application; on the following day the wound will be well.

It requires repetition in proportion to the dropsical tendency existing in the person. In some it will be necessary once a month; in others, once in three months; but, generally speaking, the usual time is every six months.

Insignificant as this operation appears, it has been known to cause the destruction of life. Two instances are within my own knowledge. One of these cases was operated upon by Mr. Green, who resides a few miles from town, and the other by myself. Mr. Green's case was published in the journals, therefore I need not scruple to mention it; but Mr. Green possesses too much manliness to regard a notice of an unsuccessful case, and it must be a mean despicable mind that would. The case is as follows:—An elderly man applied to Mr. Green with a hydrocele, which he a few days afterwards tapped. The following day the man's business led him to walk to town; on the next day his scrotum became inflamed; the third there was a gangrenous spot; and, on the fifth day from the operation, he died.

The other case was the father of one of our dressers. I performed the operation on a Saturday; the following day he walked to Pancras church; on the Monday inflammation began to show itself in the scrotum, when he sent for me; on the Thursday gangrene had taken place, and on the Saturday week after the operation he died.

Let me advise you then, whenever you perform this operation in old persons, to make them keep their beds for a few days afterwards. Some individuals are destroyed by

the slightest touch; while others, on the contrary, are not killed, do what we will to them.

LECTURE XXIV.

ON THE CURE OF HYDROCELE.

HYDROCELE is not cured by the accidental bursting of the sac; when this takes place, it is followed by a temporary cessation of the hydrocele, which either returns again, or is succeeded by hæmatocele. A gentleman who had been subject to hydrocele for many years went to the Continent, and whilst riding out on horseback, struck himself against the pommel of the saddle; for several hours afterwards the swelling became considerable; diffused instead of circumscribed; absorption however soon took place; the swelling gradually lessened, and the gentleman thought that his hydrocele was cured, in fact he congratulated himself on it. Not long after this the swelling returned, and when he came to England, he called on me, and I performed the operation for hydrocele; which presented nothing peculiar.—Another case of the bursting of a hydrocele occurred in the person of Dr. Saunders, of the other hospital, a person well known in the profession. Whilst standing on a chair to reach a book, he slipped his foot, by which means he received a blow on the scrotum, which was enlarged from a collection of water in it. Mr. Lucas, late surgeon of Guy's, who had been in the habit of tapping him for this complaint, was sent for immediately after the accident, to perform the operation again; the swelling was very large, and Mr. L., not at all suspecting that the character of the complaint was changed, put a trocar into the scrotum, but no water came, which alarmed the doctor considerably. A consultation was held, at which many of the most eminent professional men of this town were present, the scrotum wasswollen and harder than natural, blood was extravasated into the tunica vaginalis; it was determined to attempt to relieve the swelling and ecchymosis by stimulant lotions, but these failing, an incision was then made into the scrotum, when there was found some coagulable blood, which had been substituted for the water. Thus then a blow on a scrotum affected with hydrocele will change that disease into hæmatocele, which can be afterwards cured by an incision.

The cure of hydrocele is effected in three ways: 1st, by absorption; 2dly, adhesion; 3dly, granulation. Now I observed to you in the last lecture that when hydrocele is produced in the common way, medicine or local applications have hardly any influence on it; when it arises from a relaxed state of the vessels, stimulating medicines and blisters have no effect on the complaint. But I also stated on a former evening that hydrocele is produced by an inflammatory state of the parts, and that in these cases absorption by stimulating lotions should be promoted. I will now further add, that in young persons and children, who are not unfrequently subject to this affection, cure by absorption alone is effected, that is, by giving the hydrargyri submurias, scammony, rhubarb, and other medicines, so as to dispose the constitution to absorb. The liquor ammoniæ acetatis and ammoniæ muriás are the local applications generally made use of to promote absorption in the parts, and what we do to facilitate the operation of these remedies is, to have a bag or suspensory truss to hold the scrotum, and this is fastened by two tapes round the abdomen, just below the umbilicus, and kept constantly wet with those fluids, in order to stimulate the absorbents; therefore be on your guard about performing an operation for hydrocele in young persons, as the cure can be effected by absorption alone; there are a few exceptions, however, to this rule, but they are exceedingly rare; as in almost every case of hydrocele in young persons or children, the water will be absorbed.

With respect to the adhesion of the tunica vaginalis in the cure of hydrocele, this is effected in three ways, by injection, seton, or incision; but the use of injections does not always produce adhesion of the tunica vaginalis; here is a specimen, (pointing to one on the table,) which was taken from a captain of a ship one morning, on whom I performed the operation for hydrocele by injection, by which he was relieved of every symptom of the complaint; several years after this he was taken extremely ill, and I was consulted by his attendant surgeon; he was dying of some organic affection; I desired the surgeon to remove the testicle and tunica vaginalis from the side on which the operation had been performed, as soon as the patient was dead, which was

done; on examination it was found that the tunica vaginalis did not adhere completely, there were a few adhesions in some parts but not generally; the injection did not produce adhesion, but a new series of actions was set up, a deposit was secreted, and the ends of the arteries were sealed, so that any further secretion was prevented.

The process of granulation is set up when an incision is made in the scrotum, and extraneous bodies introduced, but this requires considerable caution; some surgeons use one mode of cure, some another; various are the operations which have been proposed, but most have now yielded to that of injection. In the operation by incision, you divide the scrotum and tunica vaginalis, on the front part, so as to allow the water to escape, but it was soon found that this was not sufficient to effect a cure, and it was then recommended, that after the incision had been made, a portion of the tunica vaginalis should be cut out: but this operation is followed by high constitutional irritation; it is true that it sometimes effects a cure by preventing the return of the hydrocele, but it also does it by killing the patient; in fact, the very last time that I saw this operation performed, a violent inflammation and sloughing of the scrotum ensued; why, Gentlemen, any one, rather than undergo such an operation, would submit to have a hydrocele all his life; the mode of relief is too cruel for so trifling an inconvenience. The next mode is that of introducing a tent into the tunica vaginalis; a small incision is made through the tunica vaginalis and scrotum, and a piece of lint or sponge is introduced, so as to prevent the sudden escape of the water; the water gradually issues out, during which time adhesion and granulation often take place; but this sometimes fails. Caustic and setons were formerly very much used, two remedies about which there was as much bandying and quarrelling among the members of the profession as if the world were at stake on the issue—two remedies now which are not only generally abandoned, but which I should be ashamed to own ever having used; such is the folly of quarrelling in our profession; as for arguments on subjects which are only to be settled by observation, they are of no use; and persons who argue

thus *à priori*, without a knowledge of facts, which alone ought to form the basis of argument in our profession, want that judgment which conducts a man best through life; but many were the advocates of caustic as a cure for hydrocele; and the way it was used was by taking the potassa fusa, and applying it to the fore part of the scrotum, till an eschar, of the size of a sixpence, is formed, which produces an irritation to the extent of half an inch, or three-quarters of an inch around, and then the eschar so produced destroys the skin and tunica vaginalis; as soon as the inflammation arises, the water escapes, then the parts sometimes become glued together, and granulations arise. Well, Gentlemen, this remedy soon fell into disrepute; 1st, on account of its uncertainty; 2dly, because it was dangerous to life; here is a specimen (pointing to one on the table,) taken from a person who died from the application of caustic, and this gives me an opportunity of showing you the state of the parts after the use of this application. The operation with caustic is dangerous to life, and ought not to be performed.

Operations at present used for the cure of Hydrocele.

There are but three operations I know of, which are occasionally had recourse to in the cure of hydrocele: 1st, setons; 2dly, incision; 3dly, injection. Setons are very rarely used, but I tell you, that they may now and then be, advantageously. The seton should be made in the following way: you should take a curved needle, and carry it into the tunica vaginalis and scrotum, just at the point where the trocar had been previously introduced, and include two inches above the point, where the needle enters, and bring it out sufficiently long; the result is, inflammation generally ensues, water gradually escapes, and as this takes place, adhesion of the tunica vaginalis comes on; this operation for adults has been generally abandoned, because better means have been employed; it is in those young persons whose hydroceles do not give way to the absorbent plan beforementioned: then, if children about two or three years old have hydroceles, rather than inject, use the needle and thread; the thread should be allowed to remain for 10 or 14 days, till inflammation and the adhesive process be set up;

this plan is much better for children than that of injection, because there is no difficulty in doing the former, and there is considerable in the latter; for the operation of putting a ligature through the scrotum and tunica vaginalis is effected before the child knows any thing about it; in fact, after it is done, the child may run about, the knot being allowed to remain; the water escapes by the side of the seton: for children, then, I believe this to be the best mode.

The second plan is by incision. There is a difference in performing this operation now to what was done by Mr. Hunter, who had recourse to it in preference to that by caustic or seton; Mr. H. used to put a little poultice into the part, after the opening had been made into the tunica vaginalis; a surgeon, who was present when Mr. H. was performing the operation, had mistaken the plan which he adopted, for having heard of the introduction of a poultice into the wound, he had brought materials for making one, flour, &c., and he began to mix it up in the man's scrotum; Mr. H., always ready to catch an idea, sprinkled after this some meal or flour into the wound, so as to prevent instantaneous adhesion, and promote granulations. This operation gives you the means to prevent the return of hydrocele in many cases, yet it is an operation not perfectly unexceptionable; there are cogent reasons against performing it, but if there be any suspicion of a disease of the testicle, it may be done. In old persons it is not justifiable, and I would advise you against doing it in them. Here is a specimen (exhibiting one) when death ensued after the operation I have just described; a surgeon to one of these hospitals, who has been long since dead, introduced a bit of lint dipped in oil, into an incision which he had made into the scrotum; the result was great constitutional irritation, and death; therefore there is danger of this operation in old persons, from the irritation which is likely to arise.

I shall now proceed to describe to you the operation which has superseded all others, namely, the cure of hydrocele by injection. At the time I was attending Mr. Hunter's Lectures, the town was divided in opinion as to the best mode of performing the operation for hydrocele. So great was the difference of opinion among the students of the different hospitals, that it

was quite ridiculous to observe their warmth on this subject, when there arose a plain, simple, effectual operation, which every body has since adopted. For this we are indebted to Sir James Earle *, who, in thinking upon this subject, conceived that injection of the tunica vaginalis was likely to be the best means of producing adhesion, and preventing the further formation of disease. Thus he proposed at once a most ingenious, but simple, mode of curing a disease, about which there had been so many disputes. I cannot help feeling delight, when I find a brother in the profession rendering himself useful to mankind by an invention of this kind. When we see so much trash issuing from the press, which is called surgery, it is gratifying to find, in a work like Sir James Earle's, a simple and effectual plan of curing a disease proposed, and at once adopted by the whole profession. I do not think Sir J. Earle has received the due meed of merit to which he is entitled for their improvement. I have, myself, always spoken of him in the same terms as this evening, and I shall ever continue to do so. The instruments required for this operation are an elastic bottle, with a stop-cock, a trocar, and canula. The elastic bottle should be of a moderate size, and only half the quantity of fluid contained in it should be thrown in at a time, lest the action of the cremaster should force a part of it into the cellular tissue. If this happens, inflammation and sloughing may take place around the part at which the canula is introduced. The trocar should be two inches long, and the canula should be but small. The trocar and canula should be put separately into the box, for if you are obliged to put the trocar in the canula, it will soon contract rust, and be unfit for use. The fluid used for the injection should be of a stimulating kind. If you use port wine, the proportion of wine and water should be half and half. If it be old port wine, you may mix five parts of wine with three of water, but if the wine be such as is commonly got at taverns and public-houses, in which there is a good deal of log-wood or sloe-juice to make it astringent, and a good deal of brandy to make it strong, a less propor-

* Sir Astley is in error: the operation, like the rule for solving quadratic equations, attributed to Cardan, was not *discovered* by the person whose name it bears.—Ed.

tion of wine must be used, as the injection would otherwise be too stimulating to the tunica vaginalis. Brandy, or spirits of wine, may also be employed; in the latter case, take one part of spirits of wine to fifteen parts of water. The injection which we generally use in the hospitals is the sulphate of zinc, in the proportion of one drachm to a pint of water. A gentleman, on being told that we employed the sulphate of zinc in hospitals, for injection in hydrocele, exclaimed, 'Oh, I suppose you do this to save your wine.' It is not to save our wine, however, Gentlemen, that we prefer this solution, but because we are better enabled to judge precisely of the strength of the stimulus by the use of sulphate of zinc, than by that of wine, which is subject to so much alteration. Water itself will produce a stimulating effect, if used cold. A gentleman, whose name does not immediately occur to me, has written a treatise, in which he produces several cases of the successful treatment of hydrocele, by an injection of cold water. You must not suppose, however, that one fluid will answer the purpose as well as another; for I remember a case in which an injection of milk, which was used by the surgeon, on the supposition of its being a bland fluid, produced most horrible inflammation. The tunica vaginalis suppurated, and when an incision was made to discharge the matter, the milk came out in curds, and a great quantity of pus had been produced. Be upon your guard, therefore, against making experiments of this kind. When you inject for hydrocele, you should place the patient in a recumbent posture, which will enable you to perform the operation more steadily. Before you introduce the trocar and canula, make it a rule to squeeze the scrotum and tunica vaginalis, so as to make the part where the fluid is most distinct very tense; then introduce the trocar and canula obliquely, in the same manner as in the palliative mode of treatment. Having passed the trocar and canula into the tunica vaginalis, withdraw the trocar, and push the canula alone carefully upwards, so as to prevent any injury to the testicles or spermatic cord. You should nip the tunica vaginalis round the canula, to guard against the instrument being diverted, and thus throwing a portion of the fluid into the cellular tissue. Having

taken this precaution, you are gradually to throw up the injection, turn the stop-cock, so as to confine it in the tunica vaginalis, and move the scrotum from side to side, so that the fluid may reach every part of the surface. The fluid should be suffered to remain from about four to five minutes. While it remains in the tunica vaginalis, the patient will complain of a good deal of pain; he will first feel as if the testicle were squeezed; he will then feel the pain running along the course of the spermatic cord at the spinal process of the ilium, and at the loins where the spermatic plexus of nerves arises, and lastly, at the neck of the bladder in the course of the vas deferens. The pain will be greater or less in proportion as the patient is more or less irritable. It is to be observed, however, that the degree of subsequent inflammation is generally in the inverse ratio of the pain suffered at the time of the injection. If a man lies tranquilly on the table, and tells you that he does not feel much pain, he will in general have a considerable degree of inflammation the next day. On the other hand, where much pain is felt, it is generally the effect of nervous irritability, and little inflammation follows it.

I have been under the necessity of bleeding and giving large quantities of opium to a patient in consequence of the severity of the pain produced by injection, and yet no inflammation was produced. You may say that this was in consequence of the bleeding; but this is not the case; the pain arises from irritation in the nervous, rather than the vascular system, and inflammation does not readily follow it. When you have suffered the fluid to remain five minutes, and withdrawn the instrument, you need not apply any thing to the part, but tell the patient to walk about as usual in the course of the day if he feels but little pain. If he should feel much pain, tell him to lie down, take his dinner that day, and his glass of wine after it, if he has been in the habit of doing so. After a few hours have elapsed, inflammation will probably come on.

Above all, tell your patient to come the next day, that you may see whether the inflammation, which is necessary for the cure of hydrocele, has been produced; if it has not, you must not despair of producing it. Take the part in your hand,

and touch it here and there until the patient feels a good deal of uneasiness. Then desire him to take a long walk, and to take an additional quantity of wine after dinner. In this way you will generally succeed in producing such a degree of inflammation as will be sufficient to effect a cure.

It sometimes happens, however, in constitutions which have a great disposition to inflammation, that the injection will act so violently as to produce suppuration. When there is danger of this, which you may ascertain by the great pain and redness of the scrotum, make an incision with the lancet into the part, and discharge the contents, and if the opening be not large, the cure will be effected by the adhesive process. Do not suppose that the operation for hydrocele by injection, simple as it is, is altogether devoid of danger. There have been some instances in which death has followed, and many in which life has been endangered by it. Some gentlemen who now hear me have had opportunities of witnessing the practice of the Hospitals for many years, and they must have seen many cases, in which extensive sloughing has been produced, in consequence of injury produced by throwing the injection into the cellular tissue. I will tell you a case which happened shortly after I became Surgeon at the other Hospital. I injected the tunica vaginalis of a patient for hydrocele, but did not succeed in curing him, for he came back two years after with his hydrocele as large as ever. He was naturally enough disappointed with me for my want of success, and he chose to put himself under the care of Mr. Forster. Happening to cast my eye on the man, as I passed through the wards, I asked him what was the matter with him, and he said, "Why, sir, I have got hydrocele; the disease which you attempted to cure has returned." Some time after I did not observe the man in the ward, and upon asking what had become of him, I was told that he had gone out of the hospital; but as I was walking home over the bridge, the man who told me so, accosted me and said, "Sir, I beg your pardon for telling you a story, but the truth is, that man, about whom you asked, has, indeed, gone out of the hospital, but I omitted to say, that he is dead." The truth was, that one of the dressers, who was a very steady

young man, performed the operation of injection, and that an accident happened to him, which, unless great care be taken, might have happened to any body. He did not attend sufficiently to keeping the canula within the tunica vaginalis; the consequence was that a portion of the fluid went into the cellular tissue. The man experienced excruciating pain, and the dresser immediately withdrew the canula, but very little of the fluid came out. Violent inflammation of the scrotum ensued, which went on to gangrene, and the patient died. Dr. Farmer recently met with a similar case, in which sloughing was brought on from the fluid being injected into the cellular tissue, and the result was destruction of life. Great care, therefore should be taken to prevent the fluid from escaping by the side of the canula.

I shall conclude this lecture with a few observations on hydrocele of the spermatic cord. This disease may be defined as a collection of water in the spermatic cord, but it is necessary that you should know the situation in which the water is collected. The part at which hydrocele of the spermatic cord takes place is in the tunica vaginalis, between the testicle and the abdominal ring, sometimes extending above the ring, and on that account it is often mistaken for inguinal hernia. By pressing your finger along the parts until you have passed the abdominal ring, you may judge of the nature of the tumour by its blue and semi-transparent appearance, by its being entirely unattended with pain, and by its not running into the abdomen, like inguinal hernia. The best mode of treating this disease, is to make an incision in the tumour, for injection would, in this situation, be difficult and dangerous; to introduce your finger into the sac, so as to ascertain that there is no communication with the abdomen, and then introduce a small quantity of flour to promote a slight internal irritation. In this manner the cure of hydrocele of the spermatic cord may be readily effected.

COMMENTS ON THE SPEECHES AT THE ANNIVERSARY DINNER OF ST. THOMAS'S AND GUY'S HOSPITALS*.

We have seldom witnessed a more unfortunate display than

* The proceedings at this dinner being of an ephemeral nature, a report of them will not be found in the present edition.

Mr. Travers's attempt, at the Freemasons' Tavern, to expound philosophically the causes of the advanced state of medical science in this country. He believes that medicine and surgery have in no part of the world made such progress as in England, and he attributes this prosperous state of things to an enviable advantage, which he supposes Englishmen to possess over the rest of civilized Europe, namely, that education is less diffused, that it cannot be had at a cheap rate, and that consequently none but people of substance, who have a certain stake in the country, in point of property and respectability, can bring up their sons to the medical profession. Now, without inquiring into the correctness of the facts upon which Mr. Travers builds his arguments, there are two propositions which, it seems not unreasonable to suppose, might have occurred to any man who undertook to enlighten the assembly at the Freemasons' Tavern on this important subject. First, that in proportion as the benefits of education are more widely diffused, it becomes probable that a greater *number* of active and intelligent minds will be directed to the study of a scientific profession; and secondly, that if the requisite education for that profession be limited by circumstances to a particular *class*, the aristocratical class, from a greater indisposition to change, and a stronger desire of obtaining the greatest amount of enjoyment at the least expense of labour, is the least likely to extend the boundaries of science. It may, perhaps, be considered unfair to expect that Mr. Travers should have had time to think on this subject before he made his speech at the Freemasons' Tavern; he may, in this respect, be in the predicament of the French Count, of whom it was observed, *Il se serait fait un grand nom dans les belles lettres, s'il avait eu le tems de s'en occuper.* There are facts, however, with which Mr. Travers must be acquainted, and which might have prevented him from broaching so absurd a proposition, as that the advancement of medical science is owing to the obstacles which are thrown in the way of its pursuit. He must be aware, that almost all the ornaments of his profession are men who have raised themselves from obscurity by their own industry and talents; and he cannot be ignorant of the state of medical science in Scotland, where education is cheap, compared with its condition in this country, where education, as he observes with so much apparent exultation, is 'not to be had for nothing.'

We cannot congratulate Mr. Travers on the success of his oratorical exertions during any period of the evening at the Anniversary Dinner. After ascribing the flourishing state of his profession to the restriction of education to the richer

classes of society, it is a little inconsistent to find him afterwards discoursing on the blessed Reformation, which delivered the civilized world from the thraldom imposed upon it by priests, monks, and friars.

In another speech he expresses his regret at the absence of the Physicians of St. Thomas's Hospital, and assures the assembly that it arose from no want of courtesy on the part of those gentlemen, but from a point of etiquette, because they did not participate in the business of teaching. He concludes this speech with a quotation from Ovid, after an apology to the company for the apparent pedantry of its introduction, or rather a hint that it was a pearl they had no right to expect at their repast. Now this quotation was either meant to be applicable to the Physicians of St. Thomas's Hospital, or it was not. If it were meant to be applicable, we think Mr. Travers has dealt unfairly by those gentlemen; if it were merely introduced, without any reference to its meaning, to show that

"To him Latin was no more difficile
Than to a blackbird 'tis to whistle,"

in that case Mr. Travers will only have been guilty of bad taste. For the benefit of those to whom the apology or hint might have been appropriately addressed, we will observe, that the meaning of this passage is, that Mr. Travers was ashamed to find himself in a condition to cast *opprobrium* and *reproach* upon men who were not able to refute the charge. Now, if such a passage as this were meant to be applicable to the Physicians of St. Thomas's Hospital, how can Mr. Travers reconcile it with the tribute which he had just paid to the merits of those gentlemen, and to his declaration that their offence arose from no want of courtesy or good will to the assembly?

Sir Astley Cooper made a short speech, which was characterized by his accustomed good sense and good humour. He complimented the Royal College of Surgeons on the liberality with which they had opened their Museum to the public; upon the same principle, we presume, that princes and bishops are sometimes praised in newspapers, by anticipation, for acts of generosity which they have never committed.

Mr. Gaitskell, on behalf of the Worshipful Company of Apothecaries, delivered a very sensible unpretending speech.

The other orators were Dr. Blundell and Mr. Green, and orators they were *par excellence*. It seemed to be a struggle between these gentlemen, which should most astonish the minds of the juvenile part of their auditory; and for that purpose, they had both evidently ransacked, with a laudable diligence, the volumes which, before the days of the Great Unknown, were wont to issue from the Minerva

Press. We do not pretend to adjust the claims of these rival candidates for juvenile approbation, but if we might hazard a criticism on these respective performers, we should say, that though they both equally succeeded in rendering themselves unintelligible, Dr. Blundell effected this object by a lofty and oriental style of eloquence,—Mr. Green by an artful and insinuating appeal to the feelings. Dr. Blundell's *forte* is evidently the sublime, while Mr. Green excels in the tender and pathetic; Dr. Blundell soars to the loftiest regions of romantic impossibility; Mr. Green aims at the '*molle atque facetum*,' and talks as familiarly of the sentimental affections of the heart, as if he were demonstrating the nerves and muscles in the dissecting-room. The 'bounds of time and space are too narrow' for the active imagination of Dr. Blundell; he is ambitious of escaping from the trammels of humanity, while Mr. Green is content to creep on earth, and seems anxious to rescue the members of our profession from the popular objection, that we do not overflow with the milk of human kindness. The metaphors of these orators partake of the character of their respective styles. Dr. Blundell deals in 'suns' and 'pyramids;' Mr. Green is content with 'butterflies and paper kites.' Dr. Blundell's 'sun of medicine, sinking into the western hemisphere, to be soon plunged for ever into the interminable empire of darkness' is a fine image, but we cannot help entertaining a preference for his 'pyramids, that survive the wreck of time, and smile amidst surrounding desolation.' Before dining last week at the Freemasons' Tavern, we had no idea that a pyramid could maintain such unwonted serenity, amidst the disastrous circumstances which Dr. Blundell describes; and we think, after so important a discovery, the Doctor cannot do better than apply himself forthwith to the problem which has so long baffled the sagacity of the schoolmen, '*utrum chimæra bombinans in vacuo possit comedere secundas rationes?*'

Mr. Colman, in a neat and appropriate speech, paid a just tribute to the amiable manners and unrivalled talents of the distinguished Lecturer on Surgery at St. Thomas's Hospital. The justness of the eulogium was universally felt, and Sir Astley's health was drunk with enthusiastic applause.

To the Editor of THE LANCET.

SIR—It is the habit of the managers of public dinners to take care that there should be not only appropriate toasts, but appropriate songs for the singers to follow those toasts. Thus, after the health of the King, we have "*God save the King*;" after the health of the Duke of York, "*See the conquering Hero comes*;" after the health of the Ministers,

"*Tantararara,*" &c. I was therefore rather scandalized in your excellent report of the post-prandial proceedings at the Hospital Anniversary to find that Mr. Travers's toast, "The Metropolitan and Provincial Hospitals," was followed by the song, "*We're a' noddin,*"—Anglicè, "*We are all nodding.*"—The stewards of the dinner seem, by this, to convey the idea that these great schools of medicine and surgery are in a drowsy state. How far such an assertion is true, they are very good judges (and from many things I see in your pages, I fear it is too correct), yet I may say with *Hamlet*, "I hold it not honesty to have it thus set down."

FIAT DOZY.

Jan. 15, 1824.

MR. GRAINGER.

WE have the painful task to record the death of Mr. Edward Grainger, late lecturer on anatomy and physiology, in Maze-pond, Borough. This gentleman died at his father's house, in Birmingham, at half-past five o'clock, *p. m.* on Tuesday, Jan. 13th, 1824, having scarcely reached his 27th year. The disease which terminated his existence is not yet known. The extraordinary success with which Mr. Grainger's exertions as a teacher of anatomy were rewarded, naturally leads us to inquire into his talents as a lecturer; to consider this, however, it will be necessary to see how far he was conversant with the subject on which he lectured, and in what manner he communicated his information to the minds of his hearers.

Mr. Grainger might be termed a good anatomist; he was acquainted at least with all those points which are of essential use to a practical surgeon; and though in his lectures he did not dwell much on the minutiæ of anatomy, we know that this was done for the express purpose of not perplexing those who were only beginning their studies. His lectures were devoid of many physiological illustrations; a circumstance which will not be wondered at, when it is considered how much there is to be done in the time usually devoted to a course of anatomical lectures; but Mr. Grainger's great forte consisted in his power of communicating to others the knowledge which he possessed. His descriptions were clear and concise, and his arrangement strictly logical: as a demonstrator his talents were considerable. Mr. Grainger discharged his duty towards his students in a faithful manner: he was (when well) assiduous in his attendance at the dissecting-room. We at one time thought that he had enjoyed too premature a reputation, because in the last year of his life there was wanting that zeal which characterized the early part of his career; this, we afterwards found, was to be attributed to the effects of disease, which damp the energy of the most active, and in

Mr. Grainger's case proved fatal to existence. Mr. Grainger never failed to gain the affections of his pupils—the grateful recompense for the interest he took in their welfare. As Mr. Grainger had not entered much on surgical practice, we cannot speak of his character as a surgeon: from his knowledge of anatomy, one might have augured well of his success in that department.

Mr. Grainger's general knowledge was not extensive; his extra-professional attainments were slender, a deficiency which he felt anxious to remove. In private life he was much beloved and respected by all who had the pleasure of his acquaintance.

GUY'S HOSPITAL.

Jan. 16, 1824.

Amputation at the Hip Joint.

THIS formidable operation was performed here this morning, for the first time, by Sir Astley Cooper, in the presence of some of the surgeons and pupils belonging to these institutions. The number of those present, however, was not so great as on many other occasions; no previous notice of the operation having been given, owing to its having been determined on but a few minutes before it was performed. The patient is a man about forty years of age, whose leg had been amputated some years ago, just above the knee; since which time the thigh-bone has become diseased from the extremity of the stump up to the trochanter major; and this disease has had such effect on him of late, that he has been rapidly sinking under it. The thigh was of the middle size. On being asked this morning to submit to an operation, he readily consented. At half-past one the patient was brought into the operating theatre, and placed in the recumbent posture on the table. The femoral artery was first cut down upon, and secured about one inch and a half below Poupart's ligament; but it was discovered, by passing the finger deep between the triceps and vastus internus, that the profunda was still pulsating; and it was evident the profunda was given off higher than usual, which obliged Sir Astley to secure the femoral artery almost close to Poupart's ligament. Sir Astley, standing to the outer side, with the limb in one hand and the catling in the other, commenced the operation by making an incision just below Poupart's ligament, a little to the iliac side of the femoral artery: this was continued obliquely downwards, and outwards to the back of the thigh, about one-third of the way down, from which point the knife was carried in the opposite direction, obliquely upwards and inwards, to meet the first incision: by this means forming an elliptical curve. The cellular membrane was merely cut through at first, but the knife was again carried in the same direction as

before, and thus the muscles were also separated; at this step of the operation it was necessary to apply another ligature on the inside of the limb: here the operator changed positions, and sat on a chair in front of the patient, and waited a short time to see whether there were any bleeding vessels. After the lapse of a few minutes the operation was continued, and very shortly completed, the head of the thigh-bone being removed from the acetabulum without any difficulty. Two ligatures in addition to those already used were applied, making in the whole four; the integuments were brought together, and a suture applied to the upper portion; strips of adhesive plaster, and lastly a bandage, was put over the stump: about 12 ounces of blood were lost, but it had the appearance of being venous. The limb was removed in the space of twenty minutes, the securing the arteries and dressing occupied fifteen more; the whole was therefore completed in thirty-five minutes. During the operation the man was extremely faint; but some wine being given him, and fresh air admitted, he recovered. The patient bore the operation with extraordinary fortitude; and after all was finished, he said to Sir Astley, "that it was the hardest day's work he had ever gone through;" to which Sir Astley replied, "that it was almost the hardest he ever had."

Saturday, Jan. 17.—The man was removed from the operating theatre, and put to bed: he felt exceedingly sick, and threw up all the wine that he had taken during the operation. Forty drops of tincture of opium were given him, and he was ordered to be kept exceedingly quiet. At 11 o'clock *p.m.* thirty-five drops of laudanum were again given, and early this morning twenty more. He slept three or four hours during the night, and has been disposed to sleep all day. Has been sick once or twice since yesterday, and on this account is directed to have some saline effervescing mixture occasionally. Countenance pale, and rather sallow; tongue white, and slightly moist; thirsty; skin hot and dry; pulse 144, hard; bowels not open since the operation; no pain on pressure in any part of the abdomen; feels no uneasiness in the stump, nor has the least hæmorrhage taken place: is ordered to have a little thin gruel every now and then and barley-water for his drink.

18th, Twelve.—Forty drops of tincture of opium were given the patient last night, and six drachms of castor oil this morning. Passed a good night, but feels pain and a soreness in the loins, and the stump is beginning to be uneasy. Redness of the integuments round the eyes, particularly just beneath the under eyelids; pupils natural; slight pain in the head; tongue white and moist; not so thirsty; pulse 120, small and easily compressed.

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Has taken a little beef-tea to-day, in order to promote the operation of the castor oil, which has not yet had any effect: has also had a cup of tea and a small piece of thin bread and butter.

19th, Two *p.m.*—Last evening the uneasiness of the stump became very distressing; at times there was a sensation of burning, and at others of numbness in it. He also felt a severe pain up the loins, across the abdomen, and down the right thigh. The strips of adhesive plaster covering the stump were snipped with the scissors, which allowed some discharge to ooze out; this gave him considerable relief. Forty drops of tincture of opium were given last night; was every now and then awoke in the night by a pricking in the stump, but soon fell asleep again. To-day the stump is much easier, and the pain in the loins is less; the abdomen is rather tender to the touch; bowels not open since the operation; tongue less furred, and moist; appetite bad; redness under the eyes gone; skin not so hot; pulse 98, soft. Has just taken three pills, containing fifteen grains of rhubarb: continues the effervescing mixture, and also takes some rose mixture (infusion of roses slightly acidulated), every three or four hours.

He is ordered to have six ounces of wine a day, and nourishing things of every kind, strong beef-tea, arrow-root, and meat, if he can take them, but he feels no desire to have any.

20th, Four *p.m.*—Forty drops of laudanum were given him last night, and he slept well. Stump was dressed this morning, and looked very healthy: there was very little discharge from it, and the integuments were adhering in some parts. This afternoon his bowels were open for the first time since Friday: stool was rather darker than natural, but not offensive. He appears at present fatigued, and is rather more feverish; very thirsty; tongue white; skin hot; pulse 120; countenance pale and anxious. Stump feels uneasy; and the pain across the loins is more severe: considerable tenderness on pressure over the abdomen.

He has no appetite to eat any thing, but continues taking the wine and other things as before; has also had a little jelly to-day.

21st, Two *p.m.*—The uneasiness in the wound continued till eleven o'clock *p.m.*, when he had the same quantity of laudanum as the night before: he rested pretty well, and to-day feels refreshed. Pain in the stump and across the loins is much less, and the tenderness over the abdomen on pressure diminished. Tongue moist, furred a little; not so thirsty; pulse 96, soft. Has taken a little fish to-day, which he relished: the wine, broth, and other nourishment, continued as before.

22d.—The same quantity of

laudanum was taken by the patient last night as on the preceding, and he rested pretty well. The stump was dressed to-day; it looks very favourably: the discharge is still very slight. The pain across the loins, and tenderness of the abdomen on pressure, are nearly gone; pulse 96, hard; not thirsty; appetite improving; tongue cleaner; had a natural stool yesterday evening; has taken some fish to-day, which he relished very much.

Friday, Jan. 23.—The laudanum was again repeated last night, but he did not rest well, owing, as it is supposed, to the confinement of some matter within the strapping. The stump was dressed this morning: goes on well. The quantity of discharge has increased; he is quite free from uneasiness; pulse 114, full; bowels not open to-day; tongue pretty clean, but dry; appetite better; has taken a little chicken, which he relished very much; continues to have wine, jelly, and arrow-root, and is doing extremely well.

Saturday, Jan. 24th.—The stump was so uneasy in the night that the dresser was sent for, who removed the dressings, and allowed a quantity of matter to discharge itself; this gave the patient considerable relief, and since that time he has been very easy. His general health is much the same as yesterday. Has had a beefsteak to-day, and wine and arrow-root.

25th.—Stump was dressed this morning; it looks very well; discharge not copious; in good spirits, feels quite comfortable, and continues to have animal food, wine, &c.

26th.—The laudanum was omitted last night, for the first time since the operation. Has vomited a good deal this morning, which is attributed to the omission of the opium; feels better since. Stump dressed; discharge healthy, not very copious.

28th.—Stump was dressed, and is going on well.

30th.—One of the ligatures came away yesterday. The stump was dressed to-day; integuments adhere in almost every part, except opposite to the acetabulum, where there is a sinus through which the matter is discharged.

Since Saturday last (Jan. 31st), a remarkable change has taken place in this man's case. On that day he was seized with sickness at the stomach and a diarrhœa. The first of these symptoms continued for two or three days; the other still remains, though not quite so severe as at the beginning of the week. The patient appears quite exhausted; has lost his appetite, and enjoys very little sleep. To-day (Feb. 6) he is somewhat revived. The stump looks remarkably well.

At the beginning of the week he seemed considerably relieved; but since Wednesday (Feb. 11th) the diarrhœa has become as bad as ever, and the patient seems completely exhausted. He complains of no

pain except at the extremity of the anus, which, no doubt, arises from the number of motions he has had. The tongue is red, particularly at the tip and edges, and has been so ever since the diarrhœa commenced. His pulse is quick and full; skin frequently hot, and generally dry; appetite bad. He takes the chalk mixture, with some astringents. There appears to be a collection of matter opposite to the acetabulum.

Has been considerably better this week, and on Thursday (Feb. 26) sat up by the fire for an hour. The wound is nearly healed; but there is a slight discharge of matter from opposite to the acetabulum.

March 12th.—Within the last few days has wonderfully rallied. His pulse is fuller; his bowels are regular, his appetite better, and the wound quite healed. Towards the end of last week a small quantity of matter had collected under the skin at the inner side of the stump, a little below Poupart's ligament, forming a small abscess. This was punctured with a lancet on Monday last, and the discharge from it at present is very trivial.

Mar. 19th.—Gains strength rapidly. He has been out of the ward twice during the past week, and was each time wheeled about the squares of the hospital for a considerable period.

August, 1825.—This patient perfectly recovered, and is now living at the country residence of Sir Astley Cooper.

ST. THOMAS'S HOSPITAL.

Case of Fracture of the Dorsal Vertebræ.

Timothy W., æt. 21, was admitted into Henry's ward, half-past eight, *a.m.*, Jan. 2d, 1824, under the care of Mr. Travers, with fracture of the dorsal vertebræ, just about the middle, from a fall. The accident happened half an hour before his admission, in the following manner: — Whilst carrying a chest of oranges, of near two hundred weight, out of a door, he trod on a piece of lemon or orange-peel, and slipped his foot; the chest fell forwards, and struck him on the thorax; his body was bent backwards, and he received a blow on the spine against the step of the door; and thus by a *contre coup* the injury was inflicted. On examining the patient's back, a crepitus was felt just about the middle of the vertebræ: there was a projection of the spine in this part, forming a complete bridge, together with a considerable depression in the region of the lumbar vertebræ. When this man was brought to the hospital he was cold, and his pulse slow and feeble; a little brandy and water were ordered, which revived him. He had no feeling whatever in the lower half of the body; and if pinched in any part below the umbilicus, he did not in the least feel it. This symptom remained unchanged till the time of his death. For several hours after the accident, priapism

was present, which prevented the introduction of a catheter till it subsided. This case, though extremely interesting, presented, every day, nearly the same symptoms:—loss of sensation in the lower half of the body; involuntary discharge of the fæces, and, at times, of the urine; considerable distention of the abdomen,—this affection distressed him considerably, for he was continually saying that he should burst; great thirst, and loss of appetite; pulse generally quick and small: towards the latter part of his illness he was unable to keep anything on his stomach, and he also had a troublesome cough, together with bronchial stuffing. On the 20th of January, 11 *p.m.*, he died, having lived eleven days from the accident; towards the close of his existence the bronchial stuffing increased, and he was quite unable to expectorate. The treatment of this case consisted in passing a catheter daily for the patient; but even when this was done, the urine did not flow, as the bladder appeared quite paralyzed, and considerable pressure was used in the region of the pubes to force the water out. A little opening medicine was given him once or twice; an opiate once. Twelve ounces of blood were taken from him the day after the accident. The patient was allowed a pint of porter daily, but animal food of any kind he could not take.

Post mortem Examination of the Body.

The body was examined twelve hours after death by Mr. Beck dresser to Mr. Travers, in the presence of some of the pupils.

External Appearances.—The abdomen was swollen; the face and neck were of a livid appearance, as well as the back and arms, blood being extravasated under the skin in those parts; the body was not emaciated.

Spinal Marrow.—On laying bare the vertebral column, it was found that the spinous process of the fifth dorsal vertebra was nearly separated; the transverse processes of the fourth on the right side, and the fifth and sixth dorsal vertebræ on the left, were fractured; there was a fissure in the arch of the sixth dorsal vertebra, and on examining the chest afterwards, it was ascertained that the body of this vertebra was also broken. The spinal marrow was laid bare with considerable caution; it appeared throughout more vascular than natural; immediately beneath the injured vertebræ there was some extravasated blood; but what particularly attracted attention, was the state of the spinal marrow at this point; before the dura matral covering was removed, it presented a bluish appearance, and when the sheath was slit up with a pair of scissors, the cord was found of a dark red colour,

which arose from extravasation of blood in this part. The cord was softer here than in other parts, and rather contracted.

Chest.—The lungs throughout were of a livid hue, particularly at the depending parts, and when cut into, bloody mucus oozed out in great abundance, and appeared to be streaked with pus. The plura was slightly inflamed, but did not adhere to the lungs. The heart was healthy; the venæ cavæ contained some dark coloured uncoagulated blood; the aorta and pulmonary arteries some coagulated blood. The lining membrane of the lower part of the trachea and bronchiæ was very vascular; they were filled with frothy mucus, similar to that which issued forth from the surfaces of the divided lungs. There was no effusion into the chest.

Abdomen.—The liver was very large, and easily torn through; it was of a darker colour than natural. The gall bladder contained some healthy bile. The stomach and intestines were not inflamed; the latter were distended with flatus and fæces, and of a greenish colour externally. The spleen and pancreas were healthy.—There were blushes of inflammation on the outer covering of both kidneys, and the pelvis of each was full of urine. The bladder was considerably inflamed and thickened, and adhered in every point to the surrounding peritoneum; it contained a good deal of water.

MIDDLESEX HOSPITAL.

Case of Gun-shot Wound.

JOSEPH SMITH, ætat. thirty-six, a watch-house keeper, was brought in on Monday last under the following circumstances:—It appears that he has for some time past exhibited evident symptoms of mental alienation, depression of spirits, and melancholy, in which state of mind his friends allowed him unrestrained freedom, the sole control of his actions, together with the possession of fire-arms. Under these circumstances, and with these facilities, on Monday morning last he made an attempt at self-destruction, by discharging a pocket pistol loaded with small shot, at his head; in consequence of which he was brought to the Hospital. Upon examination, there was found an irregular wound, of a triangular shape, about three inches long, behind the condyloid process on the right side of the neck; the styloid process fractured, the mastoid process of the temporal bone laid bare, and the whole of the lower part or lobe of the ear destroyed.

It appears probable, although the fact was not ascertained, that the external carotid had been divided. The parotid gland, with the portio dura of the seventh pair of nerves passing through it, were found to be partially destroyed. The patient is a stout plethoric man, and on his admission was bled to ℥xviii. and the strait jacket ordered to be

put on. Dossils of oiled lint were thrust into the wound, over which a roller was applied. A very slight oozing of blood was observable. A few hours after the venesection, his pulse, which had previously been about 74, rose to 82—accompanied with some degree of stupor.

In the evening of the same day—Pulse 78, and skin full; hot and dry; answers the questions put to him without confusion; incapable of swallowing even liquids, or the saliva which runs from his mouth: no hæmorrhage from the wound. He cannot move his tongue to the right side of his mouth, which is accounted for by the injury to the nerves already alluded to. V. S. ad ℥xvi.

Jan. 13. Pulse 70; tongue rather furred and skin dry; bowels not open since his admission.

13. Evening—Pulse 76; there does not appear to be any want of sensibility of the face, lips, or tongue—although there is a want of voluntary motion on the *right* side of the face. He cannot draw the corner of his mouth towards the ear on that side, which he can on the left with the usual facility; from this it may be inferred that the branches of the fifth pair of nerves, which give sensibility to the face, remain undisturbed. The motion of the right eye-lid is not impaired; on which account it is probable that the superior branch of the portio dura may have escaped. The pulsation of the anterior temporal artery can be distinctly felt; this, however, (supposing the carotid to be wounded,) may be through inosculations. The difficulty of swallowing has rather increased, and there is a viscid secretion thrown out from the throat.

14. Pulse 68; weak; tongue a little furred; countenance vacant; eyes dim, and pupils contracted; the skin hot and dry; sensorium not much impaired.—There has been no hæmorrhage from the wound.

℞. Infus. sennæ.
Magnesiæ sulphatis.
Aquæ hordei, aa. ℥ iv.
fiat enema.

℞. Liq. ammon. acet. ℥ ss.
Aquæ puræ, ℥ss. fiat haustus ter die sumendus.

15. Pulse 70; tongue tolerably clean, but of a whitish colour; deglutition less difficult; bowels opened once by the injection; false perception, and confusion of ideas on several points; no appearance of hæmorrhage, although there is a slight oozing of coloured fluid from the wound; should the former occur, it will be necessary to tie the external carotid artery.

Jan. 16. Pulse 84, rather full—tongue furred, of a brownish colour—deglutition tolerably perfect—Was bled last night to ℥viii. in consequence of increased vascular action with a tendency to coma or apoplexy. To-day he is rather restless and uneasy, with occasional spasms and rigors—Sensorium not much af-

fected—A small quantity of pus mixed with blood discharges from the wound—Coldness of the extremities.

Saline mixture discontinued.

℞. Tr. opii m. xxv.
Mist. Camph. ℥ iss. pro re natâ.

17. Tongue furred—Deglutition tolerably free—Complains of head-ach extending from the forehead towards the occiput—Radial artery gives 86 beats in the minute, with a jerking sensation to the finger—stupor inclining to coma.

Afternoon, 4 o'clock.—Pulse 85—skin hot and dry—breathing laborious and oppressed—lies in a comatose state, with an apparent paralysis of the left side of the body—pupils contracted—muttering delirium—bowels not open since the day before yesterday.

Medicine with the opium discontinued, and camphor mixture given him every 4 hours.

Evening.—Restless and uneasy—throws his legs and arms about, and rolls in the bed.

Emp. lyttæ nuchæ applicand.

℞. Liq. Ammon. Acet. ℥ ss.
Mist. Camphoræ ℥ iss.
Tr. Opii m. v. 4tis horis.

18. Pulse weak, about 90—complains of thirst, and swallows liquids tolerably well—occasional spasms with subsultus tendinum—some degree of mental aberration. There was a slight oozing of blood from the wound during the night, in consequence of which a sponge compress was placed over the dressings, and secured by a bandage, which was successful in arresting the hæmorrhage. About 3 o'clock, P. M. he fell into an apoplectic fit, and lay in a comatose state.—Breathing stertorous—Pulse varying from 100 to 106, very weak—extremities cold—countenance pallid, with a cold moisture on the skin.—The pulsation of the temporal artery on the side affected could not be felt.

Sinapisms to the feet were ordered; and an enema of the materials before alluded to.

Died at half-past 5, P. M.

Examination of the Body.

Most of the shots appeared to have been lost in the parotid gland, which, together with the nerves passing through it, was completely destroyed. There was a hole or opening in the mastoid process of the temporal bone, and some shots were found in its cells.

The petrous portion of the temporal bone was fractured, and some shots had penetrated the base of the skull through the cerebral fossa, where there was extravasation of blood, and an abscess in the brain.—Most of the branches of the external carotid were divided, but the trunk had escaped. The internal carotid, with the par vagum lying on its external side, remained uninjured. Some other particulars have already been mentioned in the history of the

case.—No further examination was made.

Account of the embryo of a fœtus which was found in the testicle of a child, six months old.

This case has been transmitted to Drs. Græfe and Walther, by Dr. Michaelis, who states, that it is just published at Wratislaw, in the *Tabulæ Votivæ* of Dr. Wendt. In the village of Tscheplau, near Glogau, in Silesia, in the month of December, 1817, a tailor's wife was delivered of a healthy child. Some time after, the child was troubled with a difficulty in passing its urine; and on the 13th of May, 1818, it was put under the care of Mr. Lambe, a surgeon at Glogau, who, on examining the genitals, found a natural phymosis, and the right testicle hard, and much increased in size. He did not think it advisable to perform the operation for phymosis immediately. The testicle continued to increase in size, so that on the 19th of June the scrotum hung down to the child's knee. The swelling was irregular, hard, cold, and painful to the touch. On the 9th the above-mentioned surgeon performed the operation of castration, and tied the spermatic cord near the abdominal ring. The ligature separated on the third day after the operation, and the wound healed so well that early in August the child was perfectly recovered.

The testicle weighed seven ounces, and measured four inches three lines in length, and two inches four lines in breadth. The other testicle was wanting altogether. The tunica albuginea of the testicle was of a yellowish colour, and filled with a fatty mass. On making an incision through the tunica vaginalis, the knife struck against a hard substance, which on its being extracted and carefully examined was found to be a small thigh bone without the periosteum; it was an inch and a half long. The testicle was more accurately examined, and in it were found many bones connected together by cellular membrane, and muscular fibres, the pelvis which appeared to belong to a fœtus of about four months, and a foot consisting of skin, muscle, and bone. On the sides of the pelvis were the ossa ilei, with the linea semi-circularis. Under the latter was observed the edge of the acetabulum, which has here a triangular shape. The ligamentum teres was wanting. The promontory of the os sacrum, and its articulating surface connecting it with the last lumbar vertebra, were distinctly seen.

In the middle of the pelvis was a stringy substance, shaped like a mulberry, one inch long, and one-third of an inch broad, which appeared to be the embryo of the lumbar vertebræ. In the right acetabulum was an os femoris without periosteum, and more flat than round. The neck of this bone

was wanting; but under its head were some bony concretions, sufficiently formed to be recognised as the trochanter major and trochanter minor. At the inferior part of the os femoris were the inner and outer condyles, and the tuberosities of both condyles were visible. At the left part of the pelvis the pubes and ischium were wholly wanting, but the crista of the ilium was well formed. The inner surface of the ischium was concave, the outer convex. Under the semicircular line a thigh bone, three-quarters of an inch long, took its origin, which at its inferior extremity was reflected towards the knee, where there was a marked protuberance. The tibia and fibula might be plainly seen, and the interosseous ligament was stronger than it usually is in the fœtus. The foot was of a cartilaginous structure; the toes were not developed, and it was a little turned back at the point. The posterior part of the pelvis was bent. At the superior part of the os sacrum some of the processes and sebaceous glands might be discerned.—*Journal der Chirurgie von Grafe und Walther.*

Case of an Idiot, who ate a large quantity of the berries of the Atropa Belladonna, without any serious consequences. Communicated by Dr. BODENMULLER, *Physician to the Royal Eye Infirmary at Wurtemberg.*

JOHN Zunderer, of Frontinheim, twenty-one years of age, who has been idiotic from his earliest years, but in other respects sound, on the evening of the 6th of September, ate about thirty bunches of the berries of the deadly nightshade (atropa belladonna), which were large and quite ripe. When he had satisfied himself he went home, ate a large portion of milk-porridge with great appetite, and felt no complaint. According to his own account, he was sensible of some increase of animal spirits. He went to bed at his usual hour, but could not sleep; he complained of a dryness in the throat, and asked for something to drink. A pot of beer was given him, which he immediately drank. On waking at seven o'clock in the morning of the 7th of September, he felt a swimming in the head and confused vision. His belly was swelled, the pupils of the eyes much dilated, his pulse slow and fluttering. The practitioner who was called to him, at ten o'clock, found him in this situation, without delirium or convulsions. He ordered him a quantity of milk, fresh from the cow, which produced vomiting as soon as the man drank it, and he recovered. From the enormous quantity of the poison which was thrown up, it was concluded that the stomach was cleared, and nothing more was ordered for him but a little wine whey. Three days after, the man had no other complaint, except a slight dilatation of the pupils. —*Idem.*

Use of Gold in the Treatment of Syphilis.

It is already known that Professor Lallemand has employed the murias aurico-natricum (muriate of gold and soda) with great success, both in recent and old cases of syphilis, especially in those constitutions where mercury proves injurious. He desires his patients to rub it on the tongue, gums, and inside of the mouth. The quantity is at first the fifteenth part of a grain, which is increased up to the sixth part of a grain. Six or eight applications generally cure the disease. The gums are not affected as by the use of mercury, and the symptoms of the disease very speedily disappear.

Dr. Alfort, the Swedish physician, uses the murias auriconatricum, internally, for the cure of chancres and buboes.—*Idem.*

Dr. Michaelis, of Berlin, states, in the last number of Drs. Gräefe and Walther's Journal, that he has tried the cubebs, of which such flattering accounts had been transmitted from England, in a great number of cases of gonorrhœa, fluor albus, and chronic affections of the lungs, without the slightest benefit, except in a single case of recent gonorrhœa.

A short Account of an extraordinary Pathological Case, by Dr. G. C. Fenoglio. *From Omodei's Annali Universali di Medicine.*

About four years ago, I happened to be in the house of Professor Rossi, of the Royal Academy of Turin, when a patient afflicted with a singular disease came to consult him. It arose from a whistling noise in the heart, as we then thought, which might be distinctly heard, and which, though extremely troublesome to the patient, was not at first attended with pain. This whistling was so loud, that it could be heard at the distance of some feet, and the patient assured us, that when he was attending his religious duties, this noise frequently attracted the notice of persons who were standing near him at church.

Professor Rossi determined in the first instance to ascertain whether the whistling was real, and accordingly he made the patient strip himself to the skin, in order to determine, if the whistling was not pretended, whether it arose from a defect of the respiration, or of the circulation of the blood, since it was evident that it proceeded from the left cavity of the breast.

With this view he began to try the patient by percussion; but it was evident, from his full inspirations, that nothing impeded the distension of the lungs, and that there was no effusion in the cavity of the chest. The pulse, however, did not indicate a free circulation, since the diastole corresponded to the whistling, and was very strong, but the systole, on the contrary, was weak.

On examining the circulation in the carotid and femoral arteries, we observed that the

systole was weak in the former, and stronger in the latter, which circumstance enabled us to calculate, at the same time, the intensity of the producing or exciting power, and of the re-acting force of the arteries.

The seat of the whistling was in the left cavity of the breast. It could not be supposed to arise from any organic defect, and as there were no symptoms indicating aneurismal dilatation either in the cavity of the heart, or in the aorta and pulmonary arteries, nor any which indicated the presence of polypi in the cavity, Professor Rossi concluded that it arose from one of the following causes: either because the blood continued to pass from the left ventricle into the aorta, during the diastole of the heart, and then, upon the return of the systole was impelled with force from that ventricle into the aorta; or, secondly, because the blood, in passing from the ventricle into the aorta, met with some resistance, the overcoming of which produced the whistling. He concluded, therefore, that the cause of the whistling existed at the commencement of the aorta. He advised the patient to follow scrupulously a certain regimen, calculated to protract the unfavourable results, which could not fail, however, sooner or later, to ensue.

The patient was a man of moderate stature, well formed in every respect, cheerful in disposition, and immoderately addicted to wine. He attributed his disease to a fit of passion, when he was suddenly seized with this whistling of the heart, which never afterwards left him.

This man died shortly after with symptoms of dropsy, brought on by repeated excesses in drinking. On examination of the body after death by Dr. N., it was found that the valves at the commencement of the aorta were scirrhous. Dr. N. has promised to transmit the details of this examination to Signor Rossi.

Whenever the details of the post mortem examination of this very interesting case may be given in the Italian Journals, we shall not fail to communicate them immediately to our readers.—Editor.

LECTURE XXV.

HERNIA.

We shall now proceed to the subject of hernia.—Hernia is a generic term, and is used to signify the protrusion of any viscus from a cavity, though surgeons generally confine it to protrusions of the viscera from the cavity of the abdomen. In children, who have a malformation of the bones of the head, you will sometimes see a projection of the brain through the skull, and this is termed hernia cerebri. I have also seen the lungs protruding

between the ribs, through the intercostal spaces, though instances of this kind are very rare; I have met with two only. But protrusion of the viscera of the abdomen are of the most frequent occurrence; and this arises from the bulk of the parts contained in the abdomen, and the relaxation of its parietes. If you were asked, then, what Hernia is, you would say, *a protrusion of any viscus from its natural cavity.*

Different kinds of Hernia.

There are are four species of hernia more frequently met with than others, and which it behoves you, therefore, particularly to attend to; and here I may observe that hernia is of all cases the one that requires the most prompt treatment and skill. Aneurism and stone are complaints which give time to the patient and his friends to consult those who have had greater opportunities than others of observing the diseases under which they labour; but with respect to hernia—there is no time to get aid from distant places; on your information and nerve will the safety of the patient depend, and if you be ignorant of this disease, his life will be lost.—The four species of abdominal hernia are,—1st, inguinal; 2d, femoral; 3d, umbilical; 4th, ventral.

Inguinal hernia, called sometimes spermatocele, takes the course of the spermatic chord; it varies a little in different cases, but generally follows this course.

Femoral hernia passes behind Poupart's ligament, on the inside of the femoral artery and vein, between these vessels and the os pubis.

Umbilical hernia takes the course of the umbilical cord, passing through the opening in the linea alba behind the umbilicus; this sometimes never closes, consequently, an opening remains through which the umbilical hernia protrudes.

By ventral hernia, I wish you to understand a protrusion of the intestines through the different lines of the abdomen, the linea alba, (excepting at the umbilicus) lineæ semilunares, and transversæ, which protrusion is called ventral in contradistinction to the umbilical; but besides these four kinds of hernia, several others occasionally occur.

Sometimes there is a protrusion through the diaphragm, and this is called phrenic or diaphragmatic hernia; this hernia occurs in some cases be-

tween the œsophagus and aorta, now and then between the aorta and vena cava; but these cannot be relieved by any surgical treatment, as they are not situated within view, and are not known to have existed till they are ascertained upon dissection. You will also find a hernia at times between the vagina and rectum in females, called perineal hernia, and in males between the rectum and bladder, having the same name. There is also a hernia situated in the vagina, called vaginal hernia; you ascertain the nature of this by putting the finger into the vagina; when you feel a tumour, you desire the patient to lie down, and it is easily reduced; but it immediately returns when she resumes the erect position. Hernia sometimes takes place into the foramen ovale, a fine instance of which you have had an opportunity of seeing this season at the other hospital, where there were ulcerated sinuses, and the fæces discharged through them; so you may see a hernia now and then in the ischiatic notch. These different species of hernia are very rare when compared to inguinal hernia, therefore we shall rest little on them. Now, Gentlemen, we shall show you the four different species of abdominal hernia, as they require different modes of operation, and therefore require to be correctly known.

Inguinal Hernia.—We shall mention first, that kind of inguinal hernia which takes the course of the spermatic cord; it begins with the cord just as it passes out of the abdomen, and follows the direction of the inguinal canal; its course is oblique, and on this account is called oblique inguinal hernia; it is readily distinguished from the next kind, which I shall mention to you by its oblique course. The second kind is the direct inguinal hernia; in this case, the hernia does not follow the course of the inguinal canal, but comes out directly through the external abdominal ring, and pushes before it the fascia transversalis; if there be any obliquity of the hernia, it will be towards the linea alba; thus you readily distinguish the one from the other; in the one case the hernia will be oblique, in the other directly forwards; should it be slightly oblique, it will be inclined towards the navel; therefore, this kind of hernia is called direct inguinal hernia.

Well, then, there is the hernia in which the intestine protrudes into the tunica vaginalis, called the congenital her-

nia; the tunica vaginalis remains unclosed in some persons after birth, and then this hernia occurs; now you must not think that this hernia is only to be found in children, I have met with it in a person thirty years of age; I have known hernia of the tunica vaginalis take place only four days previous to an operation being performed for it, and this in a man of thirty years of age.

There is a hernia which is found in a cyst, in the tunica vaginalis; the encysted hernia; the cyst is formed in a curious way, here is a specimen (pointing to one on the table), of this kind of hernia.

Well then, Gentlemen, if asked what are the different kinds of inguinal hernia, you would answer — first, the *oblique*, taking the course of the spermatic cord. Secondly, the *direct*, protruding directly out of the abdomen through the external abdominal ring. Thirdly, the *congenital hernia*, the hernia in contact with the testicle, or rather within the tunica vaginalis. Fourthly, the *encysted* hernia of the tunica vaginalis, formed within that coat.

Of inguinal hernia, the oblique is the most frequent, and with respect to the others they are of less common occurrence.

Oblique Inguinal Hernia.

As this hernia takes the course of the spermatic cord, it may not be amiss to recall to your minds the direction which the cord takes, though I trust there is not one present who is ignorant of it; if there should be, this kind of hernia will not be understood by him. The spermatic cord emerges, then, from the abdomen, midway between the spine of the ilium and pubes; and in this part it will be found just opposite to the iliac artery; a hernia protruding through the opening where the spermatic cord comes out, carries the peritoneum with it, and a covering of the fascia transversalis, and when you dissect it, instead of finding peritoneum, what do you meet with first? Why, the fascia transversalis, which surrounds the spermatic cord just as it passes from the abdomen; and as the cord takes its course through the inguinal canal, a covering is given off which descends on the cord itself. The inguinal canal begins at the point where the spermatic cord leaves the abdomen, and terminates at the lower abdominal ring; it is about two inches in length,

and contains the cord; it is bounded anteriorly by the tendon of the external oblique, fibres of the internal oblique and transversalis muscles, and posteriorly by the fascia transversalis. The spermatic cord descends then obliquely through this canal, and just as it passes through the lower abdominal ring, it receives a covering from the edge of the external oblique, called the fascia of the cord.

Camper has published some excellent plates showing this fascia, and how much it is thickened in hernia: well, Gentlemen, the spermatic cord will not make any difference to you in this hernia: now let me just remind you that oblique inguinal hernia begins to protrude half way between the anterior superior spinous process of the ilium and the symphysis pubis; in the spot directly anterior to the iliac artery, about an inch and half from the lower abdominal ring, opposite to the tendons of the internal oblique and transversalis muscles, where it will be important to bear in mind that stricture most frequently occurs: and not at the abdominal ring, as some surgeons have said; it is rare for it to be in this last place; in old hernia, the seat of the stricture may be at this part; but ask all those who have operated much for hernia, where the seat of hernia is usually situated, and they will tell you, not at the abdominal ring, but where I have just mentioned, and that before you can reach the stricture you have to put your finger deep down, an inch or more.

Now, when the hernia has protruded through the fascia transversalis, how are the spermatic and epigastric arteries situated with respect to it? The epigastric artery is always on the inner side of the hernial sac; here is a specimen (pointing to one on the table) in which its course is distinctly shown; in the operation then, there would be no danger of wounding this vessel, unless you cut inwards. Divide the stricture directly *upwards*, or upwards and outwards, and you will be quite safe from the epigastric artery.

How is the spermatic artery situated at the origin of the hernial sac? The hernia is above, and this vessel could only be wounded by cutting downwards; there is no danger, in operating for hernia, of wounding the spermatic artery, therefore banish it from your minds; the epigastric is the only one in danger, and

that only if you cut inwards. After the hernia has protruded through the fascia transversalis, it is situated in the inguinal canal; the next place where it reaches is just under the arch formed by the tendon of the internal oblique and transversalis muscles; and here it receives a covering from the cremaster; above the sac then are the internal oblique and transversalis, and beneath it the fascia transversalis; well, after having passed through the inguinal canal, which may be two inches or from that to two and a half long, it reaches the lower abdominal ring; and at this part the hernial sac will have two coverings, one from the cremaster, and another called the fascia spermatica; in this specimen (exhibiting one to the class) you see a hernia with all its coverings; with respect to the spermatic cord, it is behind the hernia, and the testicle below it; the internal oblique and transversalis above it, and the fascia transversalis beneath it.

Were you to dissect a hernia below the abdominal ring, you would find the fascia of the cord applied tightly over the hernial sac, which has the appearance of being the sac itself; there is a fibrous covering derived from the cremaster muscle; then cut through these and you see the hernial sac, having the character of peritoneum; you pinch it up with your fingers and divide it, when water immediately escapes. The epigastric artery is situated very close to the hernia, but a little to the pubic side. Well, it is generally thought that the hernial sac is an elongation of the peritoneum; but in the oblique inguinal hernia it is not an elongation, but only a real growth of that part. When you look at the lower part, you will often see a dark-coloured spot, having a blue appearance in the dead body; and this point is studded with numerous vessels, and in it the ulcerative process has commenced.

Some persons say, I mean speculative persons and those who have never observed, "Return the hernial sac into the cavity of the abdomen;" but how is to be returned? do those persons think that it has no attachments? it is bound by firm adhesions, and cannot be returned except in an incipient state, unless by a painful and dangerous process of dissection, which it would not be justifiable to perform.

Hernia is subject to several varieties; 1st, it is subject to a variety in *size;* this necessarily happens from the dif-

ference of its course in different persons; here is a specimen (exhibiting one to the class), so small that it has not emerged from the abdominal ring, yet is as perfect as if it had been immediately below it. Here is another specimen (pointing to one on the table) which reached to the knee. The largest hernia I ever saw was in the person of Mr. Gibbon the historian; combined with this was a large hydrocele, and in consequence of both complaints he was obliged to wear a peculiar dress.

It sometimes happens that there are hernia with the external covering so thin that you are enabled to see the peristaltic motion of the intestines; this is not unfrequently the case in large hernia. I have seen the lower orifice of the stomach pulled down to the abdominal ring.

Hernia varies as to its *contents*; at one time it contains intestines, at another omentum; and here let me observe that intestines will be generally found in the hernia of children, and that omentum is very rarely to be met with in the very young. I stated to you that there were several varieties, that the hernia sometimes enters the spermatic cord, and splits it into two parts, and that the spermatic artery and vein are before, and the vas deferens behind; here is a specimen, however, (holding it in the hand) of the spermatic cord being split by a hernia, with the spermatic artery and vein on the outer, and vas deferens on the inner side; on this account, in large hernia, if the operation is performed, the opening is made in the upper and not the lower part; in large hernia a peculiar mode of operating is required. I have seen the bladder in a hernial sac; this happens in the oblique inguinal hernia more frequently than the direct.

Symptoms.

Now, Gentlemen, I have given you the anatomy of inguinal hernia, I next come to the symptoms and diagnostic marks of this disease.

If you were asked, how you would know a hernia,—what answer what you give? Why hernia is to be known when it acts with the abdominal muscles, dilates and expands on coughing; 2ndly, from its course, beginning from above and gradually descending; 3dly, when the person is placed in the recumbent posture the hernia returns; and then by these three means will you be assisted in detecting the hernia.

Its reduction in the recumbent position is a striking mark of distinction, but not without exception; and besides, if it is a hernia, when the intestine goes into the abdomen there is a gurgling noise, from the air and fluid which it contains. When there is omentum in the sac, the sensation communicated to the finger is different; omentum is less easily distended, more solid. Some surgeons have said, "Oh! a hernia will be known to contain omentum by its doughy feel and want of elasticity;"—this may be said in the closet, but will not do at the bedside of the patient.—Here I must remark, that I have seen some of the best surgeons deceived in this point, and that when the contents of the hernial sac have been said to be intestine, they have been omentum; and when omentum they have been intestine: there is not a surgeon of any experience but will allow with me, that there is considerable difficulty in knowing whether there is omentum or intestine in the hernial sac. In operating for hernia, always do it under the impression that intestine is contained in the hernia, and not omentum, because you will be more on your guard; therefore make this an invariable rule.

Diagnosis.

In distinguishing hernia from some other complaints there is considerable difficulty.—1st, Hernia is sometimes likely to be confounded with *hydrocele:* an instance of this kind I mentioned to you in another lecture; in this case, had I introduced a trocar, I should have wounded the intestine, and destruction of life would have been the consequence. A gentleman very recently told me of a case where a hernia was mistaken for hydrocele, and the patient died in consequence; the intestine being wounded by the trocar that was introduced. The surgeon who told me this, had none of those malevolent feelings which actuate too many of our profession; it was stated in such a manner that it could be neither injurious to the individual who did it, nor any other person; it is a circumstance that every one ought to deplore.

Another reason why you should be on your guard is, that both a hernia and hydrocele may be present at the same time; the hydrocele on the fore part, and the hernia behind. Much to the credit of two surgeons who operated where both hydrocele and her-

nia were present, they performed the operation safely; the one case fell under the care of Mr. Thomas Blizard, who is an excellent anatomist, but has lately relinquished his profession. of this I am exceedingly sorry, for I think that a man has two duties to perform, one to himself, and another to the public; and if a man has opportunities of acquiring information he should avail himself of them for the benefit of himself and mankind. I do not mean to censure Mr. Blizard—but I say it to guide others; and I cannot help thinking that it is wrong for one who possesses so much substantial information as Mr. Blizard, to withdraw himself from that sphere in which he might be so useful; he might lessen his labours, and render them less severe, but not give them up altogether. There is something in the experience which a surgeon acquires at the bed-side of the sick that is worth every thing else; you may be excellent anatomists and physiologists, but if you have not watched disease in the wards of the hospital, or at the bed-side of the patient, you will not understand your profession.

I have been led into this digression in consequence of Mr. Blizard's having withdrawn himself from the profession, a circumstance which I sincerely lament. Well, Mr. B. made an incision on the fore-part of the tumour, and water was immediately discharged. This led him to think it was not hernia, and he desisted; but the symptoms of strangulated hernia still being present, he cut through the tunica vaginalis, in which the water had been contained, avoiding the spermatic cord, and behind he found the hernial sac: he dilated the stricture with a bistoury, and the patient did extremely well. The other case to which I alluded, where there was a hernia and hydrocele, occurred to Mr. H. Cline. After having evacuated the water, he dilated the stricture and returned the parts; and, as far as I recollect, the case turned out well.

There is some little difficulty in distinguishing hydrocele of the spermatic cord from hernia; the two diseases are very likely to be confounded. The transparency of hydrocele, and its beginning at the lower part of the scrotum, are in general the characteristic marks of that complaint; but I mentioned to you before, that the hydrocele

might be so large as to reach the abdominal ring, when it assumes the form and shape of hernia, and might be easily confounded with it.

There are two other diseases which hernia might be mistaken for; the first of these is *varicocele*—and what is varicocele? It is an enlargement of the spermatic veins; it begins above and gradually descends into the scrotum: the swelling is of the form of hernia, and on the hand being applied when the patient coughs, it dilates considerably; and moreover, when the patient lies down it disappears; consequently this disease is very likely to be mistaken for hernia. Very recently I saw a case where a patient had been wearing a large spring truss for a varicocele that had been mistaken for hernia, and which had chafed him considerably. I tell you, Gentlemen, how you shall distinguish it:—Tell the patient to lie down; raise the testicles, and empty the veins; then press firmly on the abdominal ring; keep your finger firmly there, and raise the patient from the recumbent position, and the swelling will return; then in this easy way may you distinguish varicocele from hernia.

2ndly.—The other disease that may be confounded with hernia is *hydrocele of the spermatic cord*; and in this complaint our diagnosis fails, when the hydrocele is situated above the abdominal ring. In the recumbent posture there is no appearance of it, but as soon as the patient rises it returns. It is situated above the ring, opposite to the tendons of the internal oblique and transversalis: pressure on this part might be of service.

The diagnosis of hydrocele of the spermatic cord below the ring is easy; above it is difficult. A truss in this complaint is not an evil, and may be worn with advantage.

LECTURE XXVI.

In the last afternoon's lecture, Gentlemen, I endeavoured to describe to you the course which oblique inguinal hernia takes, the appearance which it exhibits on dissection, its connexion with the surrounding parts, the symptoms with which it is attended, and the characteristic marks which distinguish it from other diseases.

Causes.

I shall now proceed to state to you the causes of inguinal hernia.

There are three causes of

nguinal hernia; namely, unusual pressure of the abdominal viscera, pressure of the parietes of the abdomen, or relaxation of the parietes. Pressure from within in consequence of enlargement of the abdominal viscera, the omentum and mesentery being loaded with a fatty substance, is a very common cause of inguinal hernia. It is well known that animals that are much pampered, and enjoy a great deal of rest and excessive indulgence, become the subjects of hernia. Women in a state of pregnancy are liable to hernia, though more frequently to umbilical than inguinal hernia. The intestines are forced by the uterus as it ascends from the pelvis to the upper part of the abdomen into a very small space, and in this manner protrusion sometimes takes place. The hernia is sometimes situated in the thigh, and sometimes in the groin; but it may be said to arise less frequently from gestation than from other causes. Hernia is very commonly produced by the increased action of the abdominal muscles, in consequence of some effort disproportioned to the strength of the person using it. It is for this reason that we find hernia so much more frequent on the right than on the left side, because we generally prefer the right side in making any extraordinary exertion, and the effort made by the muscles is consequently in that direction. The proportion of hernias on the right to those on the left side is about sixty-five to thirty-five. Another frequent cause of hernia is relaxation. Persons advanced in years are often the subjects of hernia, in consequence of relaxation of body. At the time I was endeavouring to learn as many facts as possible connected with this subject; I examined most of the bodies brought to the dissecting-rooms in these hospitals, and found that a large proportion of old persons in this town, who were under the necessity of using bodily exertion, were the subjects of hernia. It was in some cases necessary to examine these subjects with considerable care before the hernia could be detected; but upon minute examination, in the course of the inguinal canal or thigh, I found that old persons were very generally the subjects of inguinal or femoral, and sometimes of umbilical hernia. Persons who reside in the country, or who do not exert themselves in age, are much less subject to this complaint. It is said that in this town one person in nine is the subject of

hernia: I do not think the proportion so large; but I should say that in this town, which is favourable to the production of the complaint, from the bad state of the atmosphere and the relaxation of body produced by it, the proportion of persons affected with hernia is about one in fifteen. Heat may be also considered as a cause of hernia, from its producing a relaxation of the abdominal parietes. Thus persons in warm climates, who use much exertion, are very subject to it. The people of France are much more frequently the subjects of hernia than the English. When I first entered the Hotel Dieu, at Paris, I saw a man carried up the staircase on a sort of bier which they use for the sick, with strangulated hernia; and I was afterwards informed that Desault had that day operated, at the Hotel Dieu, on another case of strangulated hernia. This circumstance might have been accidental; but the fact is, that hernia is much more common in France than in our own country. This may arise from the great activity of that people, and, in some degree, from the warmth of the climate. Persons recovering from fevers, who are much reduced in strength, are extremely liable to hernia from any increased bodily exertion, such as riding on horseback. Certain positions of the body dispose to the production of this complaint; such as the stooping position in lifting heavy weights from the ground. If the person using such exertions is in a relaxed state of body, hernia is very often the result.

Of the Treatment of reducible Hernia.—With respect to the treatment of this complaint, Gentlemen, it is only necessary to say, that a person who has a hernia, and does not wear a truss, is never for a moment safe. The danger of the hernia is greater in proportion to the smallness of its size. If the hernia be large, it is more readily returned into the abdomen: it is rarely strangulated; and if strangulated, it is more easily reducible. If the hernia be very small, the ring through which it passes being extremely narrow, the protruded parts are very tightly embraced, the hernia is very liable to strangulation, and in this state is rarely reducible. The danger of hernia is, therefore, in the inverse ratio to its size; and if a person should say to you, "I have got a small hernia, but I do not think it of any consequence," desire him to wear a truss; and tell him that the

smaller his hernia, the more necessary it is that he should wear one.

Various kinds of trusses, some of them very ingenious, have been invented at different periods; they may all, however, be reduced to four.

The common truss is a very good one, and is perhaps a little too much despised because it is old. This truss in general answers the purpose extremely well: it does not require an understrap; and it has this advantage, that it may be worn in the night as well as during the day. The mode of its application is, merely to place it on the side of the hernia, and bring it round the body; and if you use an understrap, this should be brought between the thighs. (The learned Lecturer exhibited to the class the mode of applying this and the other species of trusses.) I do not know whether I may not have a little affection for this kind of truss; for, to say the truth, when I was about sixteen or seventeen years of age, upon hearing a lecture on hernia in this theatre, I discovered that I was myself the subject of that complaint. As soon as I felt satisfied of this fact, I could attend to no more of the lecture; but I went home, threw myself on the bed, kept my legs elevated against the bedposts, and remained in that position till Mr. Cline returned. (A laugh.) I had requested to see him the moment he entered; and as soon as I saw him, I told him that I had had a swelling for some time, which, after hearing the lecture that night, I was sure was a hernia. Mr. Cline laughed, gave me a common truss of this description, which I wore for three years; at the expiration of which time, I had not the slightest appearance of hernia. I would not, however, leave the truss off, but I continued to wear it for two years longer, and from that time up to the present moment, I have never had the least appearance of the complaint. The circumstance to which I allude may, perhaps, have given me a greater inclination to attend to this disease, and to investigate all the facts connected with it.

Of late years, many improvements have been made in trusses. Here is a spring-truss (exhibiting it to the class), invented by Mr. Egg, which does not require any string, but is merely put round the body. This truss answers the purpose extremely well, and may be worn by night as well as by day.

A most ingenious truss, which

has now come into general use, was invented some years ago by Mr. Salmon, a gentleman to whom the profession is indebted for many other ingenious inventions.

This truss, of which the principle is entirely new, is very easily applied, and may be very conveniently worn. One pad is placed upon the inguinal canal, on the side of the hernia, and the other pad on the base of the os sacrum. This truss is not liable to shift its place, and is now in very general use for incipient hernias, or hernias which are difficult to keep supported. There is, however, one objection to this truss, and that is, that it cannot be worn during the night, which is necessary to produce a cure of hernia. I am aware that some persons say, it is of no consequence whether the patient wear a truss or not, when he is in a recumbent posture, but I do not agree in this opinion. Unless a constant pressure be kept up on the inguinal canal, adhesion of the sides of the sac will not be produced. Besides, if the person cough in the night, or get out of bed to make water, the hernia is liable to descend, and if this should happen, though he may have worn the truss steadily for twelve months before, he must begin to date his cure from the last time at which the hernia descends.

For this reason, I recommended the contrivance of a truss of this kind which might be worn equally well night and day, and Mr. Ody, the successor of Mr. Salmon, has invented a truss of this description. (The learned Lecturer exhibited one of Mr. Ody's trusses to the class.) This truss answers extremely well in all cases, except one.—It sometimes happens that you meet with a hernia which you find it exceedingly difficult to support, and in which none of the varieties of spring trusses will succeed.

Some years ago, when I lived in the city, an elderly gentleman came to me with a hernia which could not be supported by any of the trusses commonly employed. It struck me that a man named Goldfinch had taken out a patent for a truss, which, as you see, (the learned Professor exhibited one of the trusses,) is a simple leathern belt, with springs of twisted wire. I sent for one of these trusses, and it succeeded completely in keeping in the abdomen a hernia for which every other truss had been tried unsuccessfully.

A person in Kent, who had himself taken out a patent of a truss, was the subject for hernia. He tried a great variety of trusses, but could not succeed in keeping his hernia in the abdomen. Mr. Edwards sent this person to me, and I advised him to try one of these trusses, which proved successful.

The contrivance and the mode of applying the truss are extremely simple. You place the pad on the hernia, pass the band round the abdomen, and fasten it on the pad: another pad goes round the inside of the thigh, and is fastened on the same pad. By this simple contrivance, the worst hernia, if reducible, may be supported.

You will be asked by the patient when you have applied the truss, how long he is to wear it; tell him to wear it at least two years. He will then ask you whether he is likely to be cured at the end of that time; your answer must be, that this will depend upon his age.

A young person is generally cured at the end of two years, but it will be advisable that he should continue to wear the truss for three years. If the person be not young, there is not much hope of effecting the cure of hernia by wearing a truss.

Even in these cases, however, a gradual diminution, and sometimes a reduction, of the hernia is effected by the wearing of a truss.

Mr. Gaitskell sent me an elderly patient with strangulated hernia, which was situated above the abdominal ring, and was extremely small. This patient told me that the hernia was formerly so large that it was in his purse, meaning that it had descended into the scrotum; but that he had worn a truss for a number of years, and that it had become gradually reduced in size. This hernia was eventually reduced, though with great difficulty. In general, if the patient's age exceed forty years, I do not promise a cure by the wearing of a truss.

When a truss has been worn for some time, the effect upon the hernial sac is, that it falls into folds by the action of the cremaster, resembling the appearance of the stomach after death, when it has undergone contraction. Here is a specimen on the table which will shew you this effect of the truss upon the hernial sac. It sometimes happens, when hernia is cured by the wearing of a truss, that water forms

beneath the part at which adhesion takes place, producing hydrocele of a particular kind. The fluid in this case is clear as water, and has not the common character of serum.

Of Irreducible Hernia.

Hernia becomes irreducible from various causes; the most common cause is, the adhesion of omentum or intestine to the interior of the hernial bag.

Here is a preparation, showing how completely a hernia is rendered irreducible by the adhesion of omentum to the interior of the sac. A second cause is the growth of omentum or mesentery, without adhesion, from the accumulation of adeps, which renders it impossible to return the hernia into the cavity of the abdomen. A third cause is the formation of a membranous band, produced by inflammation across the sac, by which the omentum and intestine become entangled, and the return of the protruded parts is prevented.

Of the Treatment of Irreducible Hernia.

With respect to the treatment of irreducible scrotal hernia, you must advise the patient to wear a simple suspensory bandage, without which he would be exposed to considerable danger, from the possibility of the hernia bursting, if he should receive a blow on the part. Mr. Norris had a patient whose hernia suddenly burst, in consequence of his striking his scrotum against a post, while he was walking in the streets of London. The hernia was returned, but the patient soon died. I knew a man with irreducible hernia, who met with a similar accident in consequence of his falling from a ladder upon the edge of a pail. The omentum could not be returned into the cavity of the abdomen, and it was found, upon examination of the body after death, that the intestines were wounded.

A patient with irreducible hernia is always exposed to considerable danger from blows which he may receive. If the hernia burst, the intestine may be returned into the abdomen, but the omentum in general cannot be returned.

When a hernia is rendered irreducible by the growth of the mesentery or omentum, there is no doubt that a patient may be relieved by abstinence in diet, and by taking such means as are calculated to reduce the bulk. Few patients however, can be induced to observe such a degree of

abstinence as may lead to the absorption of a considerable quantity of adeps, but the effects which disease produces upon hernia, by reducing the bulk of the patient, prove that benefit would arise from adopting a plan of abstinence.—A man, who had water in his chest, came to town in consequence of an irreducible hernia, which he found extremely troublesome. When I visited him, he told me that his hernia had never disturbed him until of late, when he had been troubled by a severe cough. He had at this time swellings in the legs, and other symptoms of water on the chest. He became very much reduced by this disease, and the hernia which was previously irreducible, became reducible, and was readily returned into the cavity of the abdomen, in consequence of the absorption of fatty matter in the omentum and mesentery, by the effects of his disease.

If the hernia is rendered irreducible, in consequence of the formation of a membranous band across the sac, you cannot depend upon any plan to effect its reduction. The long-continued application of cold will sometimes effect the reduction.

A gentleman in the profession, from Edinburgh, who was going out to a situation in India, after travelling all night in the mail to London, was unable to return his hernia into the abdomen. He was quite free from pain, and there was no gurgling noise indicating the presence of intestine. I told him therefore, that I did not think it of much consequence, but that he should make pressure upon it by wearing a truss. He was unwilling, however, to go out to India with his hernia for a companion; under these circumstances, I told him I did not exactly know what to recommend, but that I would advise him to place himself in a recumbent posture, and apply ice to the scrotum regularly every day; by this means a reduction of its bulk was at length, though very gradually, effected, so that the hernia could be returned into the abdomen.

In those cases in which the hernia is very large and irreducible, the best plan is to advise the patient to wear a laced suspensory bag, which by its pressure on the scrotum will not only prevent the hernia from increasing, but will diminish its size by absorption. In this manner a bulky hernia may be rendered much less inconvenient to the patient.

This, Gentlemen, is all I have to communicate to you on the subject of irreducible hernia.

With respect to wearing a truss in this state of hernia, if the patient should feel any pain, it will not be advisable. If a truss be worn in irreducible hernia, the spring should be very slight, so as to occasion no pain; otherwise there will be danger of strangulation.

Strangulated Hernia.

I shall now proceed to consider the symptoms and treatment of strangulated hernia.

A hernia is said to be strangulated, when it is not only confined within the parts into which it has descended, but when it is so much compressed by the narrow part through which it has passed, that the circulation in the intestine or omentum which has descended is in a great degree stopped. Some portion of blood is still capable of being carried to the part by the arteries, but it cannot be returned by the veins. It is a mistake to suppose that the hernia is merely incarcerated; it is not only incarcerated, but it is so constringed by the narrow orifice through which it has passed, that the circulation in the intestine or omentum is in a great degree impeded.

With respect to the symptoms which accompany strangulated hernia, the patient first complains of pain about the region of the diaphragm. He will describe the sensation to be as if he felt a cord bound tightly round the upper part of the stomach. The next symptom is constant eructation owing to the great quantity of air rising from the intestines to the stomach. The patient is next troubled with vomiting, accompanied with costiveness. He has a great disposition to have motions, but cannot succeed in his attempts to expel the fæces. There is some pain in the swelling, and a good deal at the part where the stricture is situated.

These symptoms attend the first dawn of strangulation. The abdomen afterwards becomes considerably distended with air, not at first from inflammation, but in consequence of the accumulation of flatus in the intestines. This is evident, because the patient does not at first complain of pain on pressure of the abdomen.

The vomiting becomes more frequent, and feculent matter is rejected from the stomach; I am aware it has been said,

that this is impossible; but really, Gentlemen, one can hardly hear this fact denied, and preserve one's patience.

The contents of the intestines thrown up from the stomach have the common smell of fæces, and most of you are aware that the contents of the intestines do not acquire the smell peculiar to fæces until they have passed the valve of the ilium. The matter thrown up from the stomach has not only the solidity of fæces, but the smell peculiar to them, and any man who denies that it is feculent mattér, must really resist the evidence of his senses. The fact is, that as soon as a hernia becomes strangulated, inversion of the peristaltic motion of the intestines begins.

If any of you have not witnessed the peristaltic motion of the intestines, I advise you to get a rabbit, strike it on the back of the head, and immediately open its abdomen, in order to see the peristaltic motion of the intestines. No man ought to practise his profession, without knowing accurately the nature of the peristaltic motion of the intestines.

Well, Gentlemen, as soon as any portion of the intestines is strangulated, the antiperistaltic motion begins; the valve of the ilium is of no use, and the action of the intestines becomes retrograde. Hence, the patient loses the power of discharging the fæces, and they are thrown up in the action of vomiting. A clyster will sometimes bring away a portion of feculent matter, but the quantity will be extremely small.—During the time that the abdomen is in this tense state, but unaccompanied with pain, and while there is frequent vomiting of the fæces, the pulse is hard, frequent, but very distinct; but in the next stage of symptoms, when the abdomen is not only tense but painful to the touch, you will find the pulse extremely small and frequent; so small that it can scarcely be felt; so frequent that it can hardly be counted. The vomiting and eructations continue, and the patient is pale, and covered with a cold perspiration. The tumour becomes very tense, hard, and in general a little inflamed on the surface of the skin.

A person unaccustomed to observe the symptoms of strangulated hernia, when he felt the pulse of the patient, and perceived symptoms of peritoneal inflammation, in the tenderness of the abdomen upon pressure, would say, that blood ought not to be taken

in such a case, and that if it were, the patient would be destroyed.

Gentlemen, the reverse of this is the truth; you must not be deterred by these symptoms from taking away blood in considerable quantities. The strength of the patient's pulse will be increased instead of being diminished by this course, and in proportion as he is young and athletic, a larger quantity of blood must be taken away.

The next change in the symptoms of strangulated hernia, is, that in addition to the vomiting, which is not less frequent, hiccough supervenes.

Hiccough was formerly considered to be a sign of the presence of gangrene, but it is now known not to be so. Patients have had hiccough for many hours, and have recovered after the operation for strangulated hernia.—After the appearance of hiccough, you may prevent gangrene by bleeding, and using other means for reducing the patient. The hiccough will sometimes remain for several days after the operation, and, in this case, bleeding will relieve the patient more than any thing else.

When gangrene has actually taken place, the patient will tell you that he has got rid of all his pain, and that he feels a great deal better; but if you put your hand on his abdomen you will find it still tense and tender; his pulse will be intermitting, small, and irregular, and the swelling will feel tense and somewhat emphysematous.

In this state it sometimes happens that the hernia by a little pressure may be returned into the abdomen, in consequence of the great relaxation of the surrounding parts from the effects of gangrene. Death, however, is close at hand.

I saw a man in this state at the other hospital, who declared that he was a great deal better, and begged to have a little small beer. I desired the sister to give him some, and while he was in the act of elevating himself in the bed to drink it, he fell back and expired. Be upon your guard, therefore, against encouraging the friends of a patient under such circumstances. Many a professional man has injured his reputation by holding out hopes of recovery from these delusive appearances, when in fact death is on the very point of closing the sufferings of the patient.

LECTURE XXVII.

At the conclusion of the last Lecture, Gentlemen, I detailed

to you the symptoms of strangulated hernia; and I will now proceed to describe to you the appearances of the parts after death.

Upon dissecting a person who has died of strangulated hernia—you will find a considerable effusion of lymph in the cellular tissue, in the neighbourhood of the hernial sac; and if gangrene had taken place, the parts will be found emphysematous; and wherever you press with the finger the impression will remain, that is, the part will pit. When you open the hernial sac, there will immediately escape a considerable quantity of serum; however, I ought to state, that the quantity of this fluid depends upon the nature of the hernia; the principle is this:—if it be an omental hernia, there will be but little—if it be intestinal hernia, then a considerable portion will be present. —The omentum undergoes a considerable change in its colour, being much darker than natural, owing to its vessels being filled by coagulated blood—it will likewise have an offensive smell, and if gangrenous, the smell will be highly putrefactive—its texture also becomes very much altered, not being so solid as before death, having a crackling feel, as if it contained water or air, and easily breaking by the employment of the slightest force. Behind the omentum, will be seen the intestine (if both are in the sac), having upon its surface a peel of adhesive matter; therefore, before you touch the intestine, you come to a layer of adhesive matter, with the nature of which you must all of you by this time be well acquainted—this adhesive matter glues together such portions of the intestine as happen to be in contact. The intestine will be found of a very dark colour, if it be not gangrenous, for that is not the character of gangrene, and when you are operating for strangulated hernia, if you should find the intestine as dark as red wine, still you would be justified in returning it into the abdomen, for when it is gangrenous, its appearance is very different, having upon its surface a number of green spots—not green at every part, but green spots interspersed here and there over the whole surface.

Persons, therefore, acquainted with the diagnosis of this disease, look for *small green spots*, which readily yield and give way to pressure by the finger. The very dark intestine is not in a gangrenous

state, but in a different condition. In common inflammation of an intestine, then, its appearance is florid—but not so in inflammation of a strangulated intestine contained in a hernial sac: here it is rendered exceedingly dark, owing to the interruption of the return of blood occasioned by the stricture.—The general character of parts in a gangrenous state, is, their being inelastic, and readily yielding to pressure. Well, then, continuing the examination,—as soon as you cut into the cavity of the abdomen there will burst forth a considerable quantity of gas, and the intestines within the abdomen, wherever they are found in contact, will be seen having upon them a red line, which red line will only be perceptible in those situations where the different convolutions touch each other; such, then, are the appearances discovered upon dissection of those who die of strangulated hernia. The next circumstance to look for is the seat of stricture; this is sometimes found at the abdominal ring, but not generally, except in old herniæ.

It is quite an erroneous opinion to suppose that the stricture is usually situated at the ring; even the apprentices of these hospitals can tell you the contrary, and certainly it is not situated there in one case out of five, excepting, as I before remarked, in very large and old herniæ. Those surgeons, therefore, who believe that the stricture in strangulated hernia is situated at the abdominal ring are quite unequal in point of surgical knowledge to the performance of this operation.

Far be it from me to ransack the graves of those who have been destroyed by surgeons, who suppose that the abdominal ring is the only situation at which stricture occurs. He, therefore, who goes to the operation with a belief that he shall find the stricture at the ring, and that it is not to be found at any other situation, is most lamentably ignorant of the true nature of this disease. In large old herniæ, the stricture certainly generally happens at the abdominal ring; but in recent herniæ, and those of a smaller size, it usually occurs above it, as I shall presently explain to you.

Well, then, where is the stricture commonly situated in strangulated inguinal hernia? Why, I will tell you, Gentlemen, opposite the tendon of the transversalis muscle, which circumstance is often produced

in consequence of the thickening of the hernial sac, from the pressure of a truss. Sometimes the stricture is an inch above the abdominal ring. At others, when the hernia is very large, at the ring. But when the hernia is very small, the stricture is often two inches above the ring. And it is owing to this circumstance, that the finger is often lost in oblique inguinal hernia before the stricture can be felt, so far above the ring is it situated. Sometimes the finger feels the stricture an inch above the ring, at others an inch and a half, or even two inches,—and in each of these situations it is very common. The third place in which the stricture is found is at the neck of the hernial sac, in consequence of a membranous band crossing it at that part.

The following case will illustrate this most clearly: a man was admitted into this hospital, having strangulated hernia; after the ordinary means for reducing it had been used without success, it was determined to perform the operation; the finger, after the first division of the supposed stricture, could be freely admitted within the ring, yet the intestines could not be returned into the abdomen; the opening was enlarged, and the finger again introduced, the intestine was again attempted to be returned, and the surgeon, after some difficulty, succeeded in forcing it out of sight; as it was no longer to be seen, he, in all probability, thought it out of jeopardy, and the patient was sent to his bed. The following day, when the dresser went to see this man, he found a portion of intestine protruding; this was allowed to remain—it soon began to slough, which, day after day, continued to increase until he died. Upon examination, it was found that there was a membranous band crossing the neck of the hernial sac—the surgeon, therefore, in attempting to return the intestine, had doubled it over this band, consequently the cause of strangulation was never removed; here, (holding up a preparation,) Gentlemen, you have an opportunity of observing the sac and band of which I have just been speaking; and you now see the intestine still in a strangulated state. It is not, therefore, sufficient to divide the stricture; but before the operation can be complete, you must be satisfied that the cause of strangulation is likewise removed, and that the intestine

has been decidedly returned within the cavity of the abdomen.

Another cause of strangulation, Gentlemen, arises from a portion of intestine being occasionally entangled in a part of the omentum. I saw a case of this kind in a patient under the care of Mr. Pew, of Fenchurch-street; after having divided the stricture, I was obliged, as it were, to unravel the intestine from the omentum, and even tore through a part of the omentum, before I was enabled to remove the cause of strangulation.

There are *four* situations in which the *stricture* is to be met with. At the abdominal ring in large and old herniæ; in ordinary cases, an inch, an inch and a half, or two inches above the abdominal ring, according to the size of the hernia. The stricture is sometimes, but very rarely, occasioned by a membranous band across the sac, or by a portion of omentum becoming entangled with the intestine. Knowing these facts, you will be able to contend with whatever appearances you may meet with in cases in which you are required to operate.

You will be asked, Gentlemen, what is the cause of strangulation in intestinal hernia? It will not be a sufficient answer to say, that a portion of intestine has descended into the sac; because it often happens that strangulation is produced, although only a single convolution has descended, and this convolution being elongated, does not occupy any additional space in the mouth of the hernia. The fact is, that the additional portion of intestine, though it consist only of a single volume, brings down with it a portion of mesentery, which, added to the piece of intestine previously descended, so completely occupies the space of the opening as to produce the symptoms of strangulation. This is the reason why hernia often becomes strangulated in consequence of very slight efforts; in lifting a weight a small portion of intestine may descend, and this bringing with it a portion of mesentery, produces strangulation. In omental hernia you will readily understand how strangulation is produced, because any portion of omentum which descends, must occupy an additional space.

Of the Treatment of Strangulated Hernia.

When a person has strangulated hernia, he has no hope

of safety, but in returning the intestine into the cavity of the abdomen; this, therefore, must be your first object, except in one or two cases, which I shall hereafter have occasion to mention. In order to effect this object of returning the hernia into the cavity of the abdomen, you are to employ what is called the *taxis*.

The taxis is a particular kind of pressure on the hernia, which is to be performed in the following manner:—You are to embrace the lower part of the hernia with your hand, elevate it gently, and push it towards the abdominal ring; having done this with one hand, you are to put the finger and thumb of the other on the part just above the abdominal ring, and knead it gently by a successive motion of the finger and thumb, until you at last obtain a passage for a small portion of intestine or omentum through the strictured part into the abdomen.

When, by this process, you have gradually insinuated a small portion of intestine into the abdomen, it generally happens that the rest will follow, and the hernia will consequently be returned. It is of no use to make pressure on the hernia, with a view of emptying the intestines of their contents. This is an erroneous principle, for the contents of the intestines are very rarely the cause of stricture. It does, indeed, now and then happen that an indigestible mass occupies the orifice, by which the hernia descends; but in general nothing will be gained by pressure on the swelling, with a view of emptying the intestines of their contents.

The time in which a hernia is returned by the process of the taxis, is generally from ten to fifteen minutes. Do not attempt to perform it at once; proceed gently and gradually, and never press with any considerable force on the lower part of the swelling. Pressure at the orifice will not endanger the parts, but if you press with any force on the lower part of the swelling, you will run the risk of bursting the intestine. Sometimes, indeed, we find the parts in such a state as to render the operation unavailing, as where the intestines have given way, and feculent matter has descended into the hernial sac. Be upon your guard, therefore, not to employ so much force as to endanger the bursting of the intestine. It too often happens in our hospitals that patients are lost in consequence of gentlemen being suffered to make repeated trials

of the taxis. It would be a good rule, and I wish it were adopted in our hospitals, if the taxis were only to be used once for a quarter of an hour, and not repeated until other means were employed. The repetition of the taxis is not only useless at the time, but often renders all other means for returning the hernia, which may be subsequently employed, unavailing.

It now and then happens, that a person is so extremely sensitive, and resists the employment of the taxis with so much violence, that it will be impossible to persevere, for a time, at least, in its use.

Mr. Croft, the surgeon, called upon me, when I lived in the city, and requested me to see a patient of his with strangulated hernia. I went with him immediately, and while we were walking to the patient's house, Mr. Croft said, "I do not think you will be able to return this man's hernia." I smiled, and said, "Why not?" Mr. Croft stated, that the parts about the abdomen were so exquisitely tender, that he had found it impossible to use the taxis. In fact, when I arrived I found the patient's abdomen exceedingly tense, and he roared out so violently, and resisted me so much when I attempted to employ the taxis, that I found it impossible to persevere. Under these circumstances, I desired some *ice* to be applied, with a view of diminishing the sensibility of the part, and facilitating the employment of the taxis. I called again in the evening, but was told that it was not necessary to go up stairs, for the hernia had returned of itself. In cases, therefore, where the patient suffers excruciating pain, do not employ the taxis immediately, but advise the application of ice, which will reduce the irritability of the part, and perhaps render its employment unnecessary. Mr. Newington had a patient with strangulated hernia, which returned by the application of cold water.

If you are called to a case of strangulated hernia, and find that the taxis does not succeed in reducing it, I advise you directly to *take away blood.* The quantity of blood must be proportioned to the age of the patient; if he be young and athletic, a considerable quantity should be taken away; if he be extremely old, you should hesitate in taking away much blood; but if he be of the mid-

dle age, and not infirm, you should bleed freely. This course is to be taken not merely with a view of reducing the hernia, but to prevent peritoneal inflammation after the operation, if the operation should be necessary.

It is a most mistaken view of the nature of this disease to suppose that the patient is safe after the hernia is returned by the operation; on the contrary, he is in the greatest danger after the operation unless he has been freely bled before it. If you should be asked to what extent you would bleed in strangulated hernia, your answer should be until it produces faintness, because it is in that state that the hernia is most likely to be returned. If you carry the bleeding short of this state of faintness you may as well not bleed at all. If therefore the patient be strong and in the middle period of life, you should make him stand up before you, and bleed him from a large orifice until he complains that he shall be unable to stand unless you support him. At this moment the taxis will be most likely to succeed in reducing the hernia; and peritoneal inflammation after the reduction will at the same time be prevented. If a surgeon therefore does not take away blood freely under such circumstances, his conduct will be most unpardonable.

The next mode of treatment pursued in the hospitals, where it can be most conveniently employed, is to put the patient into a *warm bath*. The usual course is to put him into a bath heated to from 90 to 100°, for a quarter of an hour, and after his body has been well washed and cleansed, it is supposed that his hernia will be more easily returned. But what is the use of such a plan of treatment? by what principle are they who recommend it guided? It may soothe and tranquillize the patient for the moment, but no effectual benefit can result from putting the patient into a warm bath, unless you keep him in it until fainting is produced. In this state you will support the patient by putting your hand behind his head, and while the abdominal muscles are relaxed, you may employ the taxis with success. It will be better to do this while the patient is in the bath, or at all events, if he is taken out of the bath, you should take care to cover him with blankets, so that the faintness may not be removed; you will hear persons say that

this remedy is of no use; it is of no use unless fainting be produced, for without this effect it ought not to be employed.

But surgeons make use of opposite plans of treatment: *cold*, for instance, and with considerable success and advantage, not by reducing the volume of air, as has been absurdly stated; for first, it has not the effect of doing this; and secondly, if it had, it would be of no service.

The diminution of the volume of air will do no good whilst the pressure remains the same; cold operates beneficially in two ways: 1st, by astringing the scrotum, and diminishing its bulk, by which means it presses against the hernia, and facilitates the return. 2dly. It appears to have a sympathetic effect in lessening and retarding the inflammation of the intestines: soon after the cold is applied, there is a diminution of pain, and it saves the patient from the danger of active inflammation; cold then is of considerable use when delay is wanted; it now and then happens that you would like to have a surgeon at your elbow in operating for hernia, though you might be quite equal to the task, to sanction your proceedings; as for the fate, heaven alone knows, for it is extremely uncertain.

Apply cold then in cases where, during the interim, you wish to have time to consult; as it delays, at least the return of the inflammation. I have seen persons brought into the surgery of this hospital, when the snow has been on the ground; and they have been placed flat on a board, and snow or ice has been applied; immediately they have become easy, and in a short time the hernia returned; therefore, the application of ice is useful in two points of view. It happens, however, that ice cannot always be procured; particularly in the country, and the substances which you will use as substitutes, are the nitrate of potash, and muriate of ammonia; these are to be mixed together, and about a table-spoonful is to be put into a pint of water; this will produce a degree of cold equal to 26° Fahr., six degrees below the freezing point; if you breathe on a vessel containing this mixture, the halitus will be converted to ice; a greater degree of cold than this even might be obtained by the addition of more nitrate of potash and sal ammoniac; as low as 20° Fahr., 12° below the

freezing point; the only objection to this is, that it does not retain its cold, but requires to be often repeated. Linen, wetted with this mixture, spread over a part, produces a considerable degree of cold. When ice is employed, it should be put into a bladder, and broken into small pieces; it should be half filled, and the part completely enveloped in it; if it is put into linen, there is a danger of some escaping, and destroying the life of the parts on which it goes. A case of this kind once happened in this hospital.

Another means that has been used, and the most successful of all is the *tobacco enema;* it is the most powerful agent we possess; take one drachm of the tobacco, and add a pint of boiling water, let the infusion remain about a quarter of an hour, and then strain; use only half at once to begin with, for though some persons might bear the whole and even more, yet there are others who cannot bear the least thing. The effect of this remedy is to quicken the pulse, and also make it small; the skin becomes cold and pallid, and there is extreme relaxation of the muscles.

A case of umbilical hernia that I saw with a surgeon in the neighbourhood of London, was diminished under the use of the tobacco enema, and on the application of the hand, it was easily returned, though it had previously resisted the taxis. The effect of the tobacco enema in hernia, depends much upon whether the hernia is situated near muscle or tendon; if it is surrounded by the former the effect will be considerable and instantaneous.

In femoral hernia, which is covered before by a strong fascia, and where there is a strong bone resting against it posteriorly, the tobacco has not the same effect as in umbilical or inguinal hernia; in umbilical hernia its action is most considerable; in inguinal next.

What I would do if I had strangulated hernia would be this: I would have the taxis employed steadily for ten or fifteen minutes; if this did not succeed, I would be bled to syncope, and then have the reduction by the hand attempted again; if this also proved unsuccessful, I would have the tobacco injection, and wait a short time; and then, if necessary, have the operation performed; it is the most egregious ignorance possible, to delay the operation so long as is often done, thereby wasting

those precious moments which, if properly used, might have been spent in saving the life of the patient; ask those about our hospitals, who are the persons who die from strangulated hernia? and they will tell you those who have the operation delayed three or four days, and are not brought to the hospital till three days after the hernia has been strangulated, and then, if operated on, they often die: the delay is the cause of the danger, and not the operation. I have had a little personal experience of this complaint, and have devoted no small share of my attention to it, and I would not wait more than twelve hours, if the tobacco enema and other means had been employed.

Now let me allude to the case of a late illustrious Nobleman*; I am almost afraid now to mention names—(*a laugh*), who died of this disease; he was in the country, and during his stay there, had strangulated hernia; he was attended by a person of strong mind, and who had studied his profession with industry; he offered to perform the operation, but it was delayed, on the ground that London skill and advice should be obtained; but before this could be had, the Nobleman died: I do not mean to under-value London skill, but it certainly is great folly to delay in this complaint. I would propose the operation, and perform it readily if it was agreed to; but if not, I would wash my hands of the affair, and be freed from the consequences.

* Francis, Duke of Bedford.—Ed.

PHYSICIANS OF ST. THOMAS'S HOSPITAL.

To the Editor of the Lancet.

London, Jan. 20, 1824.

"Suum cuique."

Mr. Editor,—In the preface to your second volume of "The Lancet," I observe that you state your determination "to keep a vigilant eye on the management of the great medical institutions of the kingdom; and to expose abuses whenever you may detect them."

In consequence of your having announced this resolution, I beg you to give publicity to the following few facts, which, from not being generally known, or *purposely* misrepresented, have caused no small degree of odium to be incurred by the physicians at St. Thomas's hospital; and I have heard them stigmatized by many individuals as "a wrangling faction, endeavouring *to disturb the harmony of the united hospitals!!*"

Now, Sir, it will be my hum-

ble endeavour in the following few lines to show, not only that the physicians of St. Thomas's hospital do *not* deserve to be thus misrepresented, but I trust I shall enable you and the public, to form a correct opinion of the quarter and the motives from whence such unfounded aspersions have arisen.

No country in the world, Sir, possesses so many splendid monuments of public and private munificence as our own, and it is impossible to produce two more striking examples than are to be found in the institutions of St. Thomas's and Guy's hospitals. According to the intentions of the founders, these hospitals were designed for the relief of the sick poor solely, and for many, very many years, no other benefits were derived from them. After a time, the professions of medicine and surgery began to be cultivated as scientific pursuits, and as they advanced, the medical and surgical officers of the hospitals, stimulated by the ardour of promoting the cultivation of their different branches of the profession, and by the advantages which cupidity pointed out as likely to arise to themselves, determined to open a school which should embrace all the various departments of medical and surgical teaching.

So long, Sir, as this *secondary* use does not interfere with the original purposes for which the hospitals were founded, no good objection can possibly be made to it; on the contrary, it renders the institutions doubly valuable.

But now, Sir, let us see what were the steps taken to effect this purpose: in the first place, the *three surgeons* of each hospital agreed that any and every pupil who entered to see the practice of the surgeons of one hospital, should be entitled to see the surgical practice of the other also; and for the prevention of any jealous feeling, they likewise agreed to divide the money arising from such pupils equally amongst themselves, and I believe also amongst the two apothecaries. Having so resolved, *they* issued *their* manifesto, and *they, the subordinate officers*, chose to designate these hitherto separate institutions of St. Thomas and Guy, by the style and title of *the united hospitals*.

Having thus, Sir, shown the origin from whence the term *united* hospitals of St. Thomas and Guy has arisen, I will proceed to the physicians.

The three physicians of *Guy's* perceiving the advantages likely to arise to the surgeons from the course they had adopted, agreed *amongst themselves* to establish a course of lectures to be delivered in *their* hospital, on the various branches of medicine, on chemistry, physiology, midwifery and natural philosophy, conceding to the *Surgeons* the right of delivering lectures on anatomy and surgery at St. Thomas's hospital. Well, Sir, the three physicians of Guy's

having thus arranged, and foreseeing the probability of more *medical* pupils entering at *their* hospital, in consequence of the medical lectures being delivered there, than at St. Thomas's, and being desirous of keeping the *whole* of the *profits* to themselves, not only made no overtures for a *union* of the *medical practice* of the two hospitals to the physicians of St. Thomas's, but purposely slighted, and decried them on any and every occasion.

For years, Sir, the medical school flourished, and the lecturers, intoxicated with success, appeared to believe that the hospitals had been founded for *their* use alone.

Was it to be wondered at, Sir, that the physicians of St. Thomas's, such men, for instance, as Drs. Fordyce, Blane, Wells, Lister, &c., conscious of their own eminent talents, and smarting under the oppression of their brethren of Guy's; was it, Sir, I say, to be wondered at, that such men should spurn at conduct like this; or that finding themselves excluded from any participation in the lectures given at Guy's, they should announce their determination of lecturing themselves?

You will naturally conclude Sir, that when *either* of the above gentlemen did announce such a determination, *every facility* would have been afforded towards its being carried into execution, by the individuals under whose government the civil affairs of the two hospitals are so ably conducted; what then must be your astonishment, when you learn that permission to lecture in the theatre of St. Thomas's hospital, *or within its walls even*, was positively refused through the *commanding* influence of *one* individual, *said* to be much *interested* in the prosperity of the existing school!! Since that period, other physicians of St. Thomas's, who have dared to estimate their own talents as highly as those of Guy's, have made repeated application for permission to lecture at St. Thomas's, and through the same overweening influence, and *interest* of *one*, have as frequently met with a decided negative. Whilst, Sir, on the one hand, it must be admitted, that competition amongst professors of any science must tend materially to the advantage of the student, it must as readily be allowed on the other, that monopoly is at all times injurious to the public; not unfrequently the monopolist defeats himself: time will show how far this may be applicable to the present subject.

I will now ask you, Sir, or any of your readers who will be at the trouble of going through this plain, straightforward statement of *facts*, whether the *physicians* of St. Thomas's hospital can be justly charged with a desire to disturb the *harmony* of the two hospitals; or whether, so long as the present oppressive sys-

tem of total exclusion is observed towards them, *they* can, in justice to themselves, recognise the two hospitals as being *really united?*

Sumus ad justitiam nati: neque opinione, sed natura constitutum est jus.

I am, Sir, your very obedient

JUSTUS.

DISSECTION.

IN the *Morning Chronicle* of Wednesday last was an account of the trial at Durham of a surgeon and medical student, for the very great crime of having taken a dead body from the Sunderland church-yard. The prisoners were found *guilty*, and the Court sentenced them to *three months' hard labour in the house of correction.*

These frequent convictions, and the shamefully-severe sentences by which they are succeeded must excite the utmost indignation in the minds of those who are anxious for the advancement of medical knowledge. The Vagrant Act, under which those absurd prosecutions take place, is one of the most noxious measures that ever received the sanction of our legislature, and is a disgrace to any country calling itself either scientific or free. From the first moment of its enactment, this bill has operated to the serious and irreparable injury of the medical student, by depriving him of the incalculable advantages arising from dissection. This injury will not long be confined to the medical profession; but will soon be severely felt by all branches of society, that is, if the cultivation of medical knowledge be conducive to its happiness. If dead bodies cannot be procured, it will be impossible for the pupils to learn anatomy, and without anatomy, neither surgeons nor physicians can practise with the least prospect of benefiting their patients.

The repeated prosecution of those persons who supply the dissecting-rooms with subjects has now become so serious an evil, that the attention of the profession should be immediately directed towards adopting some measure calculated to remove it. We would suggest the propriety of an immediate meeting of the profession being held, for the purpose of taking this important subject into consideration; or if the holding of such a meeting be deemed inexpedient, we would then propose that the matter should be discussed prior to the commencement of the next introductory Lecture at the College of Surgeons; on which occasion the principal members of the profession will be present; and should a petition to parliament be resolved on, it might be immediately submitted to the consideration of the legislature.

If a surgeon commit an error in the practice of his profession, from a deficient know-

ledge of anatomy, by the common law of the land, the patient or sufferer may recover heavy damages; and it must be in the recollection of many of our readers, that a surgeon of this metropolis, named Pettigrew, had a verdict of 700*l.* awarded against him, for having mistaken a dislocation of the shoulder for a mere sprain. Of that verdict we do not complain. It is perfectly right to visit such gross ignorance with severe punishment; but what we do complain of is—the ridiculous anomaly of first making laws to punish medical practitioners if they do not possess a knowledge of their profession, and subsequently passing other laws which deprive them of the only source from whence it is possible that knowledge can be obtained.

Jan. 25th, 1824.

To the Editor of THE LANCET.

SIR—I beg leave to address a few observations to your notice, on the subject of Messrs. Jukes, Bush, Scott, and Reed's apparatus for evacuating the stomach, in cases of poison being received into that important viscus.

It was my intention to have remained a passive observer of the rival claims of these gentlemen to the *novelty* of the invention, and of Mr. Alcock's argument to prove the converse of the proposition,—in the hope that some more eligible member of the profession would have said something on the subject, calculated either to illustrate or decide the point in question.

I have waited also in expectation of seeing Mr. Alcock's rejoinder to Mr. Scott's reply; which not having appeared, in *The Lancet* at least, I presume to offer a *fact*, which may throw some light on the subject. I beg to be fully understood that I am not the *coadjutor* or *champion* of either of the gentlemen whose names I have mentioned, neither am I actuated by any other motive than to "*let him bear the palm who merits it.*"

Under the banner of this declaration, then, I proceed to inform you, Mr. Editor, that I have herewith sent you an instrument which was in the possession of the late Mr. James Sharp twelve or fifteen years ago, which he used for the purpose of *administering enemas*. It is furnished with two *valves* (as you will perceive on examination), acting oppositely, *on the principle of the common forcing pump*. There are *two* elastic tubes which belong to the apparatus; one with *an ivory* end, pierced and *rounded*, which tube is smaller than its fellow, and more elastic. I have not been able to trace the age of this instrument beyond what I have stated, although there is every reason to believe that Mr. James had it from his brother, Mr. Samuel Sharp, formerly surgeon of St. Bartholomew's Hospital, who lived in 1750, *seventy-three* years ago!! Whether it has ever

been used for emptying the stomach, I cannot say; consequently shall not assume the fact, beyond the supposition that the *rounded* and *pierced* end pipe was used for that purpose*, to say nothing of the use of the flexible catheter for conveying nutriment *into* the stomach being *known* to our *ancestors*. Upon the whole, it would appear then, that the merit of the *application* of this kind of instrument may be due to Messrs. Reid, Jukes, Bush, and Scott; but to which of these gentlemen exclusively, must be settled by themselves. The individual who supports his theory by *personal* elucidation is, in *my* humble opinion, the *most* deserving of the "*palm*;" and whatever may be said *against* the claim of the novelty of the *invention* (which is *certainly not new*), I feel that British practitioners are indebted to Mr. Jukes for the able revival of the apparatus, which must ever be appreciated by them as an *inestimable desideratum* in the practice of medicine.

By my sending the accompanying instrument, you will, Mr. Editor, be enabled to judge how far I am borne out in my observations by the fact which I promised *à priori!* I beg to commend the apparatus to your *especial care*, and shall take leave to send for it at the end of the week.

I have used it with great satisfaction in administering enemas, and have found it an excellent adjunct in *ileus*, and in cases of *impacted fæces*, where force is required to overcome the existing resistance, or to fill the large intestines *without withdrawing* the pipe†.

I shall be very happy to show the instrument to any gentleman who may think fit to honour me with a call for that purpose.

With sentiments of high consideration, I have the honour to subscribe myself, Sir, your obedient and very humble servant,

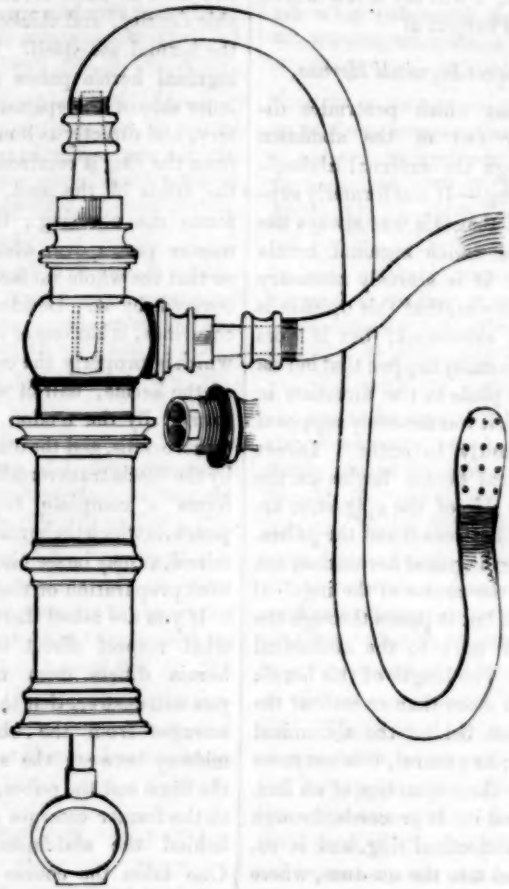
W. WANSBROUGH.

Fulham, Jan. 20th, 1824.

* It is necessary to the full comprehension of the instrument to state, that *this* tube being found unnecessarily *long* for the purpose of conveying the enema into the syringe, it was reduced to *half* its *original* length, which was equal to that of the other tube. Had the idea been entertained by me of introducing this tube into the *stomach*, it would most certainly not have been cut. It is now evidently too short for that purpose, and I regret having cut it. For enemas a common clyster-pipe is to be attached to the extremity of the long tube; this I do when the apparatus is used.

† I feel bound to say, had I not been informed of Mr. Jukes's instrument, in all human probability I should never have thought of applying my apparatus to the purpose of emptying the stomach.

Description of the Instrument.



LECTURE XXVIII.

Our principal object, in this evening's lecture, will be to describe to you the operation for strangulated inguinal hernia, and to show you, on the dead subject, the manner of performing that operation. Before I state to you, however, the best

method of performing this operation, I will say a few words on the subject of

Direct Inguinal Hernia,

or that which protrudes directly out of the abdomen through the external abdominal ring.—It was formerly supposed that this was always the course which inguinal hernia took: it is scarcely necessary to tell you, that this opinion is quite erroneous; but it does occasionally happen that hernia takes place in the direction in which it was formerly supposed constantly to occur. Direct inguinal hernia begins on the inner side of the epigastric artery, between it and the pubes. Direct inguinal hernia does not take the course of the inguinal canal, but it passes through the lower part to the abdominal ring. The length of this hernia is not more than an inch at the utmost behind the abdominal ring; in general, it is not more than three-quarters of an inch behind it. It proceeds through the abdominal ring, and is received into the scrotum, where it has three coverings instead of two, as in the case of oblique inguinal hernia.

I have already stated to you, that in the latter it receives a covering from the external oblique, namely, the aponeurosis or fascia of the cord, and another covering from the cremaster, both of them of considerable density, and thicker than the hernial sac itself. Direct inguinal hernia passes on the inner side of the epigastric artery, and directly as it emerges from the ring is received under the fascia of the cord, which forms one covering; the cremaster passes over obliquely, so that the whole surface is not covered by it. Besides these coverings, it has one of its own, which is properly the covering of the hernia, half of which is formed by the tendon of the transversalis, and the other half by the fascia transversalis. This forms a complete tendinous pouch, in which the hernia is contained, as may be seen in a beautiful preparation on the table.

If you are asked therefore in what respect direct inguinal hernia differs from oblique, you will answer, that the latter emerges from the abdomen, midway between the spine of the ilium and the pubes, whereas the former emerges directly behind the abdominal ring. One takes the course of the spermatic cord, and the other passes directly through the abdominal ring, from behind: one is covered by the fascia of the cord and the cremaster, the other has an additional covering, derived from the tendon of the transversalis and its fascia.

It may be said that I am entering very minutely into details of the structure of the parts; but in this disease, Gentlemen, your knowledge of the anatomy of the parts cannot be too minute, and unless you are thoroughly acquainted with it, you had better never attempt to operate in hernia at all. This is not a disease in which a man imperfectly acquainted with the anatomy of the parts will be able to operate; if his knowledge of their structure be not most accurate and minute, he will not be able to overcome the difficulties with which he may have to contend. Some gentlemen who now hear me may have witnessed the embarrassments of surgeons, who have come to the operation for strangulated hernia without a sufficient knowledge of anatomy. A surgeon unacquainted with the facts to which I have just drawn your attention will make his incision upon the hernia, and as soon as he sees the fascia of the cord he will make a little cut, dividing a few fibres, under which he will put a director, and proceed to make a slit upwards. Instead, however, of coming to the hernial sac, as he expected, he will find something else to divide; and in this state of embarrassment he will probably turn round for assistance, and ask what he should next do. Such a man, Gentlemen, ought never to enter the operating theatre: no man should attempt to perform an operation, if he is obliged to apply to others for assistance. Well, he will divide this covering; and still, not coming to the hernial sac, he will probably express his surprise at finding the hernia so completely buried. Gentlemen, if a surgeon is acquainted with the anatomy of the parts, he knows that there are, of necessity, two layers to divide before he comes to the hernial sac; and that in direct inguinal hernia there is, besides the coverings formed by the aponeurosis or fascia of the cord and the cremaster a third covering, like the peritoneal bag, composed of the tendon of the transversalis and its fascia. There is a preparation on the table which will give you an opportunity of seeing the epigastric artery close to the mouth of the direct inguinal hernia, on the outer side. This species of hernia was first observed by Mr. Cline, senior, in the year 1777, on opening the body of a person who had been a patient of Mr. Hawkes of Chelsea. He was surprised to find the hernia on the inner side of the epigastric artery,

and he was in the habit of mentioning this case in his lectures. This circumstance led others to observe this species of hernia, and it is now well known to occur occasionally. I cannot state exactly the proportion of cases of oblique to those of direct inguinal hernia. There is at this time, in the other hospital, a patient with fracture of the thigh-bone, who has also direct inguinal hernia.

You will be asked how you distinguish direct from oblique inguinal hernia; your answer should be, that they are distinguished by the two following circumstances: — In the *first* place, tracing the spermatic cord, you will find that in direct inguinal hernia the hernia is behind the spermatic cord, whereas in oblique inguinal hernia the spermatic cord is behind the hernia. *Secondly*, when you trace the mouth of the hernial sac, in oblique hernia, you find it above the abdominal ring, towards the spine of the ilium; whereas in direct nernia there is rather an inclination inwards, towards the umbilicus, so that it passes in a direction from without towards the pubes; from above downwards, with a slight obliquity outwards. These are two points which can only be distinguished by those who have frequently observed the disease in the living subject, and who have also had frequent opportunities of examining, in the dissecting-room, the bodies of those who have died under the disease. Bearing these points in your minds, you will be able to form correct general principles by which you may be guided in performing the operation for strangulated inguinal hernia.

The cause of direct inguinal hernia is generally some great exertion of the lower part of the abdominal muscles. It happens most frequently in patients who are the subjects of stricture. The greatest number of herniæ I have ever seen in one patient amounted to five. This man, who had a very bad stricture, had three herniæ on one side, and two on the other; one on the inner side of tne epigastric artery, one on the inner side of the umbilical, two on the opposite side of the epigastric, and another on the opposite side of the umbilical artery. This species of hernia arises more frequently from the efforts made to expel the urine in cases of stricture, than from any other cause. Direct hernia may be truly called a rupture; whenever a tear of the parts takes place, direct, and not oblique inguinal hernia, is produced: I have never seen an

oblique hernia produced by a blow on the abdomen. When the direct hernia is reducible, you should apply the truss not so as to press upon the pubes, for this will give pain, but upon the parts a little above the abdominal ring. You should not press upon the whole of the inguinal canal, as in the case of oblique hernia; but the truss should be so applied as to make its pressure bear towards the centre of the abdominal ring. When a direct inguinal hernia is strangulated, the patient is often in great danger, though it appears to be reduced, as the intestine may still be strangulated within the hernia. An out-patient at the other hospital came to the surgery with strangulated hernia, and a gentleman supposed he had succeeded in returning it, as he had pushed it through the abdominal ring. As the man, however, still complained of pain, he was admitted into the hospital. The symptoms were not relieved; no stools could be procured, and in three or four days he died. On examination of the body after death, it was found that the hernia was passed through the abdominal ring, but the stricture was still remaining upon it; so that the hernia was strangulated behind the abdominal ring.

Operation for Strangulated Hernia.

Before I describe to you the operation for strangulated hernia, let me make one or two observations: first, perform the operation before there is any peritoneal tenderness: there will be always tension of the abdomen from inflation of the intestines, as I mentioned to you before; but tenderness from peritoneal inflammation, if present when the operation is performed, renders the issue doubtful; because, though the division of the stricture liberates the parts which are pressed, yet it does not retard peritoneal inflammation; therefore make it a rule to operate before any symptom of it appears. Secondly, you may wait a longer time in old persons before you perform the operation, than in the young or middle-aged. In a boy, for instance, you should wait but for a very short time after you have used the other means; in an older person you may stop longer, because the parts are generally more relaxed. Having used the means which I recommended to be adopted, without success, you will then proceed to the opera-

tion. The patient should be placed on a table from two to three feet high, with the legs hanging over the end; the hair having been previously removed from the pubes, so as to prevent any getting into the wound, you should commence the incision from the upper part of the tumour, in whatever situation it may be, and carry it along its middle to the lower part; there will be no necessity to continue the incision quite to the lower part, if the hernia be large, as then it often happens that there are vessels crossing in that part. By the first incision you lay bare the fascia of the cord, and in doing this you will divide a small artery, the external pudendal, which crosses directly opposite to the abdominal ring; some will then say to the assistant, "Press on the artery till the operation is over;" but the instant the finger is removed, a jet of blood issues forth, and obscures the part which you are so anxious to see distinctly. The better plan is, to take a tenaculum, and secure the two ends of the artery, by which means you will be able to have a good view of the different parts during the remainder of the operation.

Having secured the vessel, you scratch through the fascia of the cord, just below the ring, with considerable care, separating it from the cremaster muscle; a small opening being made, you introduce a director upwards to the abdominal ring, and inferiorly to the lower part of the swelling, and divide the fascia more or less, as may be required; the next parts that will be brought into view are the fibres of the cremaster muscle, passing obliquely from above downwards; this covering is of considerable density, and must be opened with care; a director is to be introduced under it, in the same way as the fascia of the cord, and then it is to be divided; as soon as this is done the hernial sac becomes exposed; it is of a blue appearance, and semi-transparent from the fluid it contains; so the character of the sac is quite different from that of the coverings, and the one may be easily distinguished from the other. Having laid bare the sac, you pinch it between your fingers, and feel distinctly the intestine and omentum within it; in rubbing the hernial sac between the fingers do not use any force, as this is exceedingly dangerous; well, when you have raised the sac so as to

separate it from its contents, take the knife and make a small cut into it, not downwards, but in a lateral direction; place the instrument horizontally, so as to avoid the danger of wounding the intestine, a danger to which you would be exposed if you cut downwards. As soon as an opening is made, water generally escapes, if intestine be included in the sac, and there are no adhesions. Having opened the hernial sac, a director is to be introduced as far as the abdominal ring, and then it is to be divided up to that extent; the director is then to be carried to the lower part of the sac in the same way. When both omentum and intestine are in the sac, the omentum will be found before, and the intestine behind; there will also be a small portion of omentum at the upper part. After having opened the hernial sac, the great difficulty commences; you are next to feel for the stricture; put your finger (and the little one is the best for the purpose) into the hernial sac, and ascertain if the stricture is situated at the abdominal ring; and if it is, what you have to do is, to spread the omentum on the fore part of the intestine, like an apron, so as to cover it entirely; by this plan the intestine is less liable to be wounded, and it adds exceedingly to the security of the patient; and then you pass a probe-pointed bistoury, guided on the finger, and divide the stricture, not very freely, but to a small extent; a slight motion of the knife will do it But the stricture is seldom situated at the abdominal ring. I recollect asking one of our apprentices last year, how many times he had seen the stricture at the abdominal ring, and he told me never. My experience does not exactly coincide with this; but I believe the stricture is never situated in that part but in old and large herniæ; and if a man sits down to the operation, under the supposition that it is there, he will be likely to destroy the life of the patient: I will tell you what he would do, he would pass the instrument on the finger up to the abdominal ring, and divide it; then he would endeavour to push the intestine into the abdomen, but it would return as often as the attempt was made; and not conceiving the stricture at any other part, his attempts would be repeated, and the force employed would most probably rupture the in-

testine. No, Gentlemen, the stricture is usually situated at the upper part of the hernia, just opposite to the tendon of the transversalis muscle, or else in the hernial sac itself; and what you have to do is, to slit up the abdominal ring, to hook up the abdominal muscles, and draw them upwards towards the abdomen; then to pull down the hernial sac; by this means you expose the stricture, and render the operation more safe to the patient. The plan that used to be adopted was, to introduce the finger high up into the hernial sac, with the knife on it, and thus divide the stricture; but in this way the danger is increased, as the parts are concealed from view. The prope-pointed bistoury is blunt to the extent of a quarter of an inch, sharp for half an inch, and then blunt again, so that you introduce it on the director or finger, and divide the stricture without fear of cutting too much. The stricture being divided, you next return the intestine; the intestine is to be returned before the omentum. You should always at this stage introduce a finger, to see whether the parts be freely returned or not, and are not compressed at the place where the stricture was situated; another advice that I will give you is, if there be any air in the intestines projecting above the stricture, bring it down to the lower part, and by this means they will be more easily returned. The intestines should be returned piece-meal to the cavity of the abdomen, and then the omentum should succeed it. But there is one point that I have not spoken of, on which I will say a few words: the direction in which you are to divide the stricture so as to avoid the epigastric artery; it has been said that this artery has been made a bug-bear to frighten students, and that the danger of wounding it has been magnified; but, Gentlemen, look at the specimen (exhibiting one to the class) contained in this glass; see the effects of dividing this artery; I might say, here is murder—

"Out damn'd spot!"

This specimen was sent me by Mr. Lawrence, an excellent surgeon, the bare mention of whose name will be sufficient to awaken feelings of respect in the minds of all for his character as a surgeon, an anatomist, and a man. Mr. Lawrence dissected it from a patient who had died after the operation for strangulated her-

nia, and he found that the epigastric artery had been divided; thinking that it would be a valuable addition to the museum, he was kind enough to send it. One of our gentlemen was so unfortunate as to divide this artery, because he cut inwards instead of outwards, thinking that the hernia was inclined a little in that direction; therefore, a person who is an excellent anatomist may wound the epigastric artery, if he divide the stricture in a lateral direction; but not so if he follow the rule that I have laid down, viz., to cut *directly upwards*. You must divide the stricture in the centre, and cut upwards, let the hernia be where it may; bear this rule in mind, and you will be in no danger of wounding the epigastric artery. I will now tell you how you are to treat the omentum and intestine. There is some difficulty in ascertaining whether the intestine be gangrenous or not; if there be any dark brown spots on it do not let that prevent you from returning it. Sometimes the intestine adheres to the sac; if the adhesions be slight, break them down with the finger, or divide them very cautiously with the knife. If they are general and strong, the best plan will be completely to divide the stricture, so as to return the strangulation, and leave the intestine in an irreducible state. An irreducible hernia is not dangerous, provided there be no strangulation. You will know whether the intestine be in a gangrenous state from the appearance of thick green spots, which may be easily broken down with the nail. What would you do under such circumstances? I cannot do better than relate a case in which you will have both precept and example: A woman was brought to this hospital with strangulated hernia, under the care of Mr. Chandler. The dresser came up to me (I was in one of the squares of the hospital at the time), and said that he was going to see for Mr. C., and that if he were not at home, he should request me to operate. Mr. C. not being at home, I was sent for to perform the operation. There was a blush on the parts, which, together with their soft state, led me to think that gangrene had commenced; this opinion I soon found to be correct. As soon as I made an incision through the integument, there was a strong smell of putrescence and fæces. I proceeded, opened the hernial sac, and turned it aside to ex-

pose the intestine, and divided the stricture; the gut appeared almost in too bad a state to return. It then struck me, that I could relieve this patient, and I made an incision an inch long on the front of the intestine, allowed the fæces to escape, and returned the intestine to the abdomen. The operation was performed on a Friday; feculent matter continued to discharge through the wound, and not by the regular canal, till the Wednesday following. Two days after this, a week from the operation, she had several stools per anum, of a greenish colour; and the patient recovered.—Some time after, Mr. Brown, of Rotherhithe, a very respectable surgeon, called on me, and said that I should be surprised to hear that the patient I had operated on in this hospital, at such a time, had been delivered of a full-grown child. A curious circumstance attending this is, that she was with child at the time of the operation and did not miscarry. The operation was performed in March, and the woman was brought to bed in August, at which time there was no appearance of any thing to be seen.

The learned Professor now went through the different steps of the operation for strangulated hernia on the dead subject, precisely in the way recommended in another part of the lecture.

LECTURE XXIX.

ON HERNIA.

I MENTIONED to you, Gentlemen, in the last lecture, the mode in which the intestines are to be treated under the different circumstances of adhesion, gangrene, or strangulation. But there is one point I omitted on that occasion. There is a peculiar sort of hernia which contains the cœcum; this gut sometimes descends into an inguinal hernia of the right side, and on dissection you find that it adheres to the posterior surface of the scrotum. This cœcum is not enclosed in the hernial sac, but the hernal sac is before it. Those who have studied the anatomy of the viscera know that the cœcum is confined posteriorly by cellular membrane, and that the peritoneum passes over it anteriorly. On the posterior surface of the cœcum there is no peritoneum, unlike, in this respect, to the other intestines, with the exception of the duodenum and colon. When the cœcum, therefore, descends, it brings

down the peritoneum in front; but behind there is merely cellular membrane, by which means it is confined to the scrotum so securely, that it will be impossible, in many cases, to return it; then the stricture must be divided, and the intestine allowed to remain. Last summer many of you had an opportunity of seeing this kind of hernia operated on, by Mr. Key; the patient did extremely well. I have never operated on a case of this kind myself, but have dissected it, and I always found the intestine adhering to the back of the scrotum, the same as when the bladder is in an inguinal hernia. When the bladder protrudes in a hernia, it is covered anteriorly by peritoneum, but posteriorly it is confined by cellular membrane, the same as the cœcum. When the cœcum is included in a hernia, it will be known by the *appendix cæci vermiformis*.

Treatment of the Omentum.

With regard to the omentum after the operation for strangulated hernia, it is more easy to treat than intestine.

If the quantity of omentum be small, and little changed in character, you must return it to the mouth of the hernial sac, so as to seal up the opening; if the omentum is only returned to this part, it glues the sides of the mouth together, and prevents the ready descent of hernia in future. This, then, is the plan you are to pursue with the omentum, when it is small, and its character little changed.

But it often happens that a considerable portion of the omentum descends. When this is the case, the omentum is not thin and fine as in its natural state, but the different layers unite and form a solid mass. Here are two specimens (exhibiting them to the class) in which large portions of omentum had descended. The plan that you are to adopt under these circumstances, is to remove a large part of the omentum by the knife, and return the remainder to the mouth of the sac to plug up the opening. After cutting away the omentum, numerous vessels will frequently bleed; these should be drawn out with a small pair of forceps and lacerated; the laceration of the vessels often stops the bleeding. When the vessels continue to bleed, ligatures should be applied; care should be taken that the ligatures are merely put on the vessels, and that no omentum is included. The ligatures

must be let to hang out of the hernial sac, and in three or four days they will separate. When the omentum adheres to the internal part of the hernial sac, considerable freedom may be used in destroying the adhesions; but I would not advise the use of the knife; just tear through those first in front, with the finger, and then spread the liberated omentum out, and lastly tear through the adhesions which confine the omentum to the back of the sac; ligatures must be applied to the bleeding vessels. When the adhesions are torn through, and the vessels secured, the omentum must be returned as mentioned above: take care that all the vessels are secured, and that hæmorrhage has entirely ceased; else when the omentum is returned, the warmth will bring on the bleeding.

Omentum in a State of Gangrene.

When the omentum is in a gangrenous state, it will be known by the blood coagulating in the veins, and this is the criterion whether it is to be returned or not. To ascertain this, pass your fingers along the surface of the omentum, and if the blood be coagulated in the veins, there will be a crispy feel. The omentum in a state of gangrene has nothing of the blue appearance seen on gangrenous surfaces, nor any of the green spots to be found on the intestine in a similar state. When the omentum is gangrenous, excision is the treatment always adopted; cut away the omentum close to the mouth of the hernial bag, and leave the remainder to plug up the opening; the vessels must be secured. The practice of the old surgeons used to be, to apply a ligature on the part just above the gangrene, a practice that one scarcely knows how sufficiently to condemn. What is the operation for strangulated hernia performed for? to accomplish what object? why, to relieve the omentum or intestine from its strangulated state. Under the old plan, no sooner was this done, than a stricture, worse than the one which existed before the operation, was produced; consequently the continuation of the symptoms, and ultimately destruction of life, used to be the consequence. The practice is one that cannot be thought of without being shocked that it was ever adopted.

Treatment after the Operation.

You must bring the integu-

ments together, and keep them in apposition by means of sutures; do not include any parts in the sutures but the skin, and bring the edges so in contact as to produce adhesion; if you can effect this a great advantage will be gained. After the operation for strangulated hernia there are two things from which danger is to be apprehended; first, that the intestines may not perform their office, and the fæces not pass in their natural course; secondly and principally, that peritoneal inflammation may come on, and produce the same effect as if gangrene were present. The object then should be to close the wound as completely as possible, and for this purpose slight pressure will be of service. If the hernial sac remains open, the process of adhesion will be difficult; but if adhesion of the sac takes place, peritoneal inflammation will probably be prevented. After the integuments have been brought together by means of sutures, slight pressure should be made by dossils of lint, and the parts should be supported in a suspensory bandage. The suspensory bandage will be of use in preventing the formation of matter in the scrotum. There are three things, then, that you are to attend to in the after treatment: first, keeping the parts together by sutures; secondly, applying pressure by dossils of lint; thirdly, the use of the suspensory bandage. You order the patient to keep the horizontal posture, but, above all, direct he have his evacuations on foul linen, and not be allowed to get up. If strict orders be not given to this effect, the patient will get up to go to stool, and great mischief will most probably be done by the exertion. Mr. CLINE operated on a patient in this hospital for strangulated hernia, and the parts were returned to the abdomen; but the patient got out of bed a short time after the operation, and when on the close-stool the intestine descended into the sac, and displaced the dressings. Mr. CLINE was sent for, who found the hernia as large as before the operation; he reduced it, and ordered that the patient should not quit his bed. I mention this case to point out to you the necessity of enjoining the horizontal posture. You will be gratified on the following day if the patient have a motion. In five or six hours after the operation give a little sulphate of magnesia or castor-oil. The more mo-

tions a patient has after the operation for hernia the better; I never saw any injury done to persons from having too many, but have seen them die for want of a sufficient number. When a patient has two or three motions, the surgeon thinks he will do well, but the danger is not over, and it will be necessary to keep up a free discharge from the bowels by opening medicines, or the patient will die. The history of a case is generally this: in four or five hours after the operation the patient has a motion, and in the course of twenty-four hours, two or three, and he will be supposed to be doing well. On the following day there will be no motion; the abdomen is tense and tender to the touch, and vomiting comes on. The patient, Gentlemen, at this time is in the greatest danger; you must bleed largely and purge him freely by medicines or injections. You do not find that the peritoneal inflammation usually comes on, if venesection has been resorted to before the operation. Calomel with opium should be given; five, or even in some cases ten, grains of calomel, and from one to two grains of opium. It will be useless to give calomel with any other medicine than opium, for it will be rejected; purgative clysters, together with cathartic extract, should also be administered. Were I to tell you how many I have known do well for three days, and then die after all, I should enumerate a long list; great danger is to be apprehended for some time afterwards, and even those who have two or three motions within the first twenty-four hours, often die. The patient will be sometimes affected with hiccup: this is not the result of gangrene, but peritoneal inflammation, and must be treated by bleeding and purgatives; these may be aided by a little opium.

I will mention to you the most striking example that now occurs to my mind of hiccup after the operation. I was sent for to Maidstone, to operate on a patient for strangulated hernia. The gentleman had a large intestinal hernia, and the symptoms were exceedingly severe. I performed the operation, returned the intestine, and left the patient in what is termed a comfortable state. I was exceedingly gratified on the following day to hear that the patient was very easy; but it was stated in the letter that the hiccup was as bad as when I operated

I wrote to say that this was not the result of gangrene. No, Gentlemen, I assure you it is the result of peritoneal inflammation, and take my word for it, no other means but the antiphlogistic treatment will do. The patient of whom I am speaking was bled twice. The operation was performed on Monday, and the hiccup did not leave him till the following Sunday; during great part of the time there was tenderness of the abdomen on pressure. The hiccup then, I again repeat, is not the result of gangrene, but of inflammation of the peritoneum, or intestine. The treatment you are to pursue is to deplete the patient, and procure copious evacuations from the intestines.

I will tell you the circumstances to be attended to respecting the return of a hernia:—The operation does not prevent the future descent of the intestine; but the application of a truss early, prevents it from being so large. The patient should be kept in bed for some time after the operation, and good granulations be produced. Dossils of lint should be applied and a truss, so as to make pressure, and close the upper part of the sac. Never let the patient rise from bed without a truss to press on the sides of the sac.—It has been proposed to cut away the hernial sac, in order to produce a more rapid cure. The hernial sac has been cut away; and I will relate to you a case in which you will have an opportunity of seeing the result of this treatment:—Mr. Holt, an intelligent surgeon, sent for me to go with him to Tottenham, as he was going to perform the operation for strangulated hernia; I went; and Mr. H. operated; all the steps of the operation were well performed. When the stricture was divided and the parts returned, Mr. H. said, what shall we do with the hernial sac, for it appears quite detached and isolated? I stated that I thought it would be a fine opportunity for ascertaining the result of cutting away the hernial sac. It was removed at the neck, and in three weeks from this, hearing that the woman was out of bed, I called on her; she was up and had a truss on. On examining the part, I found that there was a rupture as large as that before the operation, nay larger, and that there was no adhesion of the mouth of the sac.

The cutting away of the hernial sac is quite useless. Plans have been proposed of

introducing gold wire for the purpose of dividing the hernial sac at the mouth, also of rubbing the parts with certain substances for the purpose of exciting adhesive inflammation; but all these proposals are mere quackeries. One of those fellows who are in the habit of publishing their cures of hernia, and their methods of preventing the future descent of the hernial sac, called upon me, and asked whether I would like to go and see a patient of his, whom he had cured by rubbing the parts with some preparation. "Why, upon my word," said I, "I feel no inclination to go, for I know you might just as well ask me to go and see you jump to the moon!"—'Well, sir,' said he, 'then you will not see him?'—"No," said I, "I will not." Four or five months after, this man having quarrelled with the junto with which he was united, came to me, and said, 'Sir, it was entirely an imposition. What do you suppose we rubbed our patients with, in order to impose upon the public?'—"I cannot tell," said I.—'Sir,' replied he, 'it was nothing but hedge-hog's fat. It cost us some trouble to catch our hedge-hogs; but it was the fat of that animal with which we pretended to prevent the descent of hernia'—You may suppose, Gentlemen, that I felt no regret at having refused to see this man's patient.

Operation for large Herniæ.

I shall now proceed to describe to you the operation for hernia when of considerable size, which requires a very different mode of treatment from hernia of a small size. I know no situation in which a man is placed under greater difficulty than that in which a surgeon has to operate on a hernia of very considerable size, and finds a great quantity of intestine in the lap of the patient, and the parts so diminished from the length of time the hernia has existed, that there is no room left for the return of the intestine which has descended. He tries to push back the intestine; it eludes his efforts, and after repeated attempts, when he has at length succeeded in returning a considerable portion of it into the abdomen, the whole rushes down again into the scrotum. So much handling of the intestine necessarily leads to such a degree of inflammation as to occasion the death of the patient. In this manner, a large hernia, when operated upon in the common way, generally proves destruc-

tive to life. Here is an example (exhibiting a preparation to the class) which shows you the result of such cases. This preparation was taken from a patient in the other hospital, who had a hernia of very considerable size, which was operated upon in the common way by making an incision into the hernial sac. The surgeon who performed the operation, finding the intestine returning upon him in the manner I have described, another surgeon, who was present, said, "Let me try." He began trying apparently very gently and carefully, but the intestine eluded his attempts, and upon his using a little more force, it burst, and the fæces escaped over his hands. This man lived a week after the operation, and then died from want of nutrition. It was the small intestine which burst, and the fæces escaping by the orifice, there was no opportunity for such a degree of lacteal absorption as was necessary for the support of his constitution, and he died from irritation and inanition.

I shall now give you an account of a case, and describe to you an operation which is not difficult, and which may be adopted with safety to the patient in these cases. After the lecture, one evening, Mr. Birch's dresser came to me and said, "Sir, there is a patient with a very large hernia, which is strangulated; Mr. Birch does not like to come down to the hospital at such an hour, and I should be glad if you would undertake it." I went immediately; the patient was brought into the operating theatre, and a most formidable hernia it was. I said to the gentlemen in the theatre, if I operate in the usual manner on this hernia, I know what will be the result; I shall either burst the intestine in attempting to return it, or I shall not be able to return it at all: I will not open the hernial sac. The man was placed on the table, and I operated upon him in the following manner:—I made an incision to the extent of three inches in the upper part of the hernia, an inch and a half above the abdominal ring, and an inch and a half below it, believing that I should find the stricture at the abdominal ring, as it was a large hernia, or not more than an inch above the ring. This incision exposed the tendon of the external oblique, above the abdominal ring, and the fascia of the cord, or superficial fascia, which is derived from the tendon of the external oblique below the ring. Hav-

ing made this incision, and laid bare the fascia of the cord, I made a small opening to the extent of about an inch below the abdominal ring, and put a director into it. Having insinuated the director between the fascia of the cord and the cremaster, I passed it under the abdominal ring; and carrying a probe-pointed bistoury upon this director, I divided the ring to the extent of an inch. I then put my hands upon each side of this immense swelling; and as soon as I did so, I had the pleasure of hearing the gurgling noise, which every surgeon acquainted with this subject knows to be the token of the contents of the intestine passing into the abdomen: a portion of the intestines was returned into the cavity of the abdomen, but all the force I could venture to use could not return the whole. By dividing the stricture, however, the man was relieved from the symptoms under which he had previously laboured. On the following morning, when I visited the patient, I found that he had a very bad cough, in consequence of which the contents of the abdomen had been thrown again into the sac, and the hernia was as large as when I performed the operation. There were no symptoms of strangulation, however: the portion of intestine was easily returned into the abdomen by pressure; and I had ultimately the satisfaction of seeing this man discharged from the hospital perfectly cured. I have performed this operation three times: in two cases successfully; in one of them the patient afterwards died of peritoneal inflammation. All you have to do is, to bring the edges of the wound together, and let the hernia, if large, remain. The patient whose case I just mentioned wears a bag-truss, and is in the habit of coming to Launday's occasionally to get a new truss, which is made to lace so as to reduce considerably the size of the hernia. If I had a large hernia strangulated myself, this is the operation which I would have performed.

Hernia in the Inguinal Canal.

There is a small hernia that occurs above the abdominal ring, and does not emerge through it at all, which is equally as dangerous as a hernia of twenty times its magnitude. This is a case which it is difficult to ascertain in the living subject. A patient will come to you with symptoms of strangulated hernia, and you find a fulness on one side above the abdominal ring, which is not observ-

able on the other; tenderness upon pressure of the part where the fulness is, and a great disposition to vomit. The operation which it will be necessary to perform in this case is, to make an incision along the course of the inguinal canal, a little obliquely above the abdominal ring, so as to avoid making the opening large. The incision through the integuments lays bare the tendon of the external oblique; having laid bare this tendon, and made an incision through it, the hernia immediately appears projecting through the edges of the wound. The hernial bag is covered by a tendinous process which passes from the upper aperture, from which the hernia proceeds. As soon as the hernial sac is laid bare, a little fluid escapes; you will find the stricture at the orifice. Here is a beautiful preparation (exhibiting it to the class) in which you see the stricture, and the appearances which the hernial sac assumes. You are to introduce a small director into the orifice, and divide the stricture by making a slit upwards with a probe-pointed bistoury.

At the conclusion of the lecture, the learned Professor exhibited to the class a fracture of the neck of a thigh-bone, which had been presented to him that day by Mr. Clarke, a dresser of the other hospital. It was taken from a woman aged 84 years. The fracture took place eight weeks and four days ago; and what he particularly wished the class to observe was, that there had not been the slightest attempt at union. They were all aware that if the fracture had taken place in another part of the body, in the arm for instance, the parts would have nearly united by this time; or, at all events, abundance of callus would have been thrown out. Here there was not the slightest attempt at ossific union.

System of Anatomical Plates, with Descriptive Letter-press. Part III. *—By* JOHN LIZARS, *F.R.S., Lecturer on Anatomy and Physiology, Edinburgh.—Daniel Lizars, Edinburgh; and S. Highley, London.*

THIS part contains ten plates, exhibiting the blood-vessels and nerves of the upper and lower extremities. The correctness of the representations, and the care with which the engravings are executed, reflect the highest credit on the author, and entitle his work to the attention of the profession at large; but the surgical observations, interspersed throughout the description given of these plates, render them particularly useful.—There is no part of the human body more important, in a surgical point of view, than the arteries; they are often the seat of disease, and subject to accidents requiring operations that can only be performed by those well conversant with their

situation, and on this account the surgeon will find the fasciculus before us of great assistance. The descriptions of the plates are clear and concise; there is all that precision in the anatomical terms for which our northern brethren are so remarkable, and which, to our discredit, we still refuse to adopt. Should the execution of the future numbers equal that of the past, they cannot fail to meet with general support. We perceive that this part is dedicated to Sir Astley Cooper.

GUY'S HOSPITAL.

January 24, 1824.

Securing of the Carotid Artery.

About one o'clock most of the students attending the Borough Hospital were assembled together, for the purpose of seeing a ligature put on the common carotid. At twenty minutes past one the patient was brought into the operating theatre, to undergo the operation.

The man (J. C—) is 40 years of age, and says, that about five months ago, he first felt a small lump on the left side of the neck, which has since gradually increased. The tumour at present occupies a considerable portion of the front and outer part of this side of the neck, extending above to the base and angle of the lower jaw, and below to within three-quarters of an inch of the clavicle; its broadest part or base is placed superiorly; the inferior extremity of the tumour is much narrower, and rounded somewhat like an egg; it has a fluctuating feel, and there is a strong pulsation in it; the integuments are very slightly discoloured, being red in one spot only.

For the last month the man's situation has been very distressing; he has had great difficulty of breathing and swallowing; a fulness on that side of the face and neck; and within the last few days there has been a constant flow of saliva from the mouth, together with a soreness of the left side of the tongue; he has latterly been obliged to lie with the body bent forwards, and the head much inclined towards the chest, as this was the only position in which he could be easy. He was admitted into the hospital on Wednesday last (Jan. 21st), and since that period has taken some opening medicine. His countenance is pale, voice hoarse, body emaciated, pulse 84, and weak. Under these circumstances, the left common carotid was tied in the following manner: — The patient being placed in the recumbent posture on the table, with the head and shoulders a little elevated, and the face turned towards the right side, the operator, seated on a chair before him, commenced the incision just above the sternal extremity of the clavicle, and carried it in rather a curved direction round the lower part of the tumour, on the inside of the sterno-cleido-mastoideus muscle to the extent of two inches; it was necessary to divide nearly

the whole of the sternal portion of this muscle, by which means the sheath was laid bare; at this stage of the operation the knife was dropped, and the director used to clear the cellular membrane and scratch through the sheath; the knife was only again used to cut through a few of the fibres of the sterno-hyoideus and sterno-thyroideus muscles, to allow of greater room: the sheath was much thickened, the artery was also deeply situated—circumstances which tended to retard the operation. The vessel being exposed, an aneurismal needle, forming a segment of a larger circle than those instruments usually do, was introduced from the outer to the inner side under it, and then a single ligature was tightly tied, care being taken that every thing but the artery was excluded; as soon as this was done the pulsation of the tumour instantly ceased. The integuments were brought together, one suture in the middle of the wound applied, and straps of adhesive plaster and simple dressing put over it. One vessel only was secured during the operation, which was supposed to be a muscular branch supplying the sterno-cleido-mastoideus muscle. Very little blood was lost.

The operation was completed in an hour and five minutes.—The operator was Mr. Key.

Sunday, Jan. 25, 3 P. M. Has been on the whole very easy since the operation, and slept soundly during the greater part of the night. Says that the difficulty of deglutition and respiration is much less. Feels at times a throbbing pain at the top of the head. The left side of the face is cooler than the right, and appears slightly swollen. Pulsation of the tumour quite gone.—Pulse 144, small.—Respiration 26, sonorous.—Tongue covered with a thick white fur, edges red.—Bowels not open since Friday evening.—Takes a little barley-water to drink, and has tea and milk together, with a little bun besides—Some infusion of roses and sulphate of magnesia have been ordered for him to take every four hours till his bowels are open.

26th, 12 A. M.—Slept very little in the night, owing to a short cough, which distresses him a good deal. The irritation is confined to the upper part of the trachea, and is supposed to have been produced by the recurrent laryngeal nerve being disturbed during the operation. The part at which the ligature was applied was not more than the third of an inch from that nerve, therefore it was scarcely possible to avoid it altogether. Expectorates pretty much mucus; but it merely comes from the fauces and pharynx. Pulse 120, small.—Tongue furred. Bowels open once this morning early.—Size of the tumour diminished one third.—Can swallow much better, and is able to lie on the right side, or sit up in bed. Takes a little broth and tea, with some bread soaked in it. Infusion of roses and sulphate of magnesia to be continued.

27th, 12 A. M. On account of the irritation about the trachea, and his having been accustomed to the use of tobacco, he was ordered to smoke a pipe, which relieved him considerably. Slept soundly during five or six hours in the night. Cough better.—Tumour much smaller than yesterday; deglutition easier: pulsation of the temporal artery, on the side affected, not to be felt. Bowels open once last night.—Pulse 100, small; the wound is nearly healed; takes occasionally a linctus made of mucilage and syrup of white poppies. Diet as yesterday.

28th, 2 P.M. Did not sleep well last night; irritation of the trachea less; deglutition better; size of the tumour continues to diminish; bowels opened copiously this morning; pulse at the right wrist stronger than at the left, 120; says that he has felt ever since last night a numbness down the left side.

29th. Numbness down the left side nearly gone; feels a throbbing pain at the top of the head; cough less; pulse 126, full; thirsty; bowels not open to-day.

Friday, Jan. 30th.—Throbbing at the top of the head less. Slight numbness down the left side still continues.—Size of the tumour diminished one half.—Cough better.—Pulse 114.—Bowels open twice this morning. Smokes a pipe occasionally, which lessens the irritation in the trachea.

Jan. 31st. Passed a very restless night, on account of the pain in the top of the head and down the left arm; sick at the stomach, but has not thrown up; pulse 150, small, respiration 30; tongue furred, but moist; bowels open twice; took two pills with calomel and opium, and has slept pretty much since; ligature came away this morning; wound not united; discharge pretty copious.

Feb. 1st.—Rested very little: pain in the head and arm gone, but is griped and has severe pain between the umbilicus and pubes, tenderness also in that part on pressure; sickness at the stomach; pulse weak and quick, 120; bowels open three times.—Emplastrum lyttæ parti abdominis dolenti applicetur.

2d. Took an anodyne last night; slept well; pain in the lower part of the abdomen relieved; great tenderness on pressure all over the epigastric region, particularly on the right side; says that he has had a liver complaint for several years; extremely low; lies on the right side; countenance pale; pulse at the wrist scarcely perceptible; breathing weak; tongue covered with white fur, and dry; complains of no pain; bowels not open to-day; there is a slight puffiness of the skin over the left pectoral muscle; takes nothing but a little wine and water.

3. Took an anodyne last night; extremely low: complains of pain down the left side: *facies hippocratica*; extremities cold; pulse not to be

felt; bowels not open; died this evening.

The body was inspected the following morning by Mr. Key, in the presence of several of the pupils. On examination, there was found an aneurism of the *arteria innominata*, which had obliterated the subclavian artery on the right side, and extended across the lower part of the trachea, just behind the top of the sternum to within a very short distance of the spot where the ligature was applied on the carotid. The aneurismal sac of the carotid was completely sealed, the artery having been closed by the application of the ligature. The brain appeared rather paler than natural, the lungs were inflamed a little; the bronchial glands were enlarged, and some of them in a state of suppuration. The lining membrane of the bronchiæ was red; the bronchiæ themselves were nearly full of muco-purulent fluid; the liver was very soft, and easily torn through. The other parts appeared healthy.

Although the above case has terminated fatally, the operation unquestionably reflects great credit on the surgical talents of Mr. Key, for without great self-possession and a most accurate knowledge of the anatomy of the parts, it would have been impossible for any surgeon to have succeeded in applying a ligature on an artery circumstanced as the carotid was in this instance, completely surrounded by aneurismal tumours, and between which there was not more than the eighth of an inch of the vessel where it could have been secured.

ST. THOMAS'S HOSPITAL.

Sphacelus of the left foot and ancle joint—Ossified arteries.

Jan. 26, William B. æt. 43, weaver was admitted into St. Thomas's Hospital, (George's ward,) Jan. 1st, 1824, under the care of Mr. Travers: says, that about seven weeks ago, he set out from Bristol for London, in a waggon; the weather was at that time cold. During the first night, his feet felt as if they were dead, particularly the left; and he also felt so unwell, that he was unable to get out of the conveyance to take any exercise; the numbness of his feet increased during the journey. When he arrived in London, (4 days from the time he set out) his left foot had become quite black, and most of the toes of the right. As soon as he came to town, he was visited by a medical man, who ordered a poultice to be applied to the left foot, composed of linseed meal, wetted with beer grounds. A few days after this had been put to the limb, vesicles came out in the neighbourhood of the ancles, some of which were snipped and others broke; they contained clear fluid; the skin under the bladders was white when they first broke, but it soon became black like the rest of the foot. A fortnight after his arrival in town, a wound broke out in the exact

spot where the bladders had previously been, and has been extending ever since. A poultice was also applied to the right foot, and after it had been on about five or six days, the skin came off from the great toe and one next to it, and then an ulcer formed. The ulcer on the left foot has been gradually spreading ever since, but that of the right has not affected any other part but the two inner toes.

State of the left foot.

The whole of this foot is quite black, and insensible to the touch, and is nearly separated from the leg, having but very slender attachments in one or two points by the capsular ligament, and the tendons of the tibialis posticus and peronei muscles, which have not yet separated; the foot however is quite loose, and must soon drop off. For the space of about three inches round the lower part of the limb, where the skin is destroyed, there are some red granulations, from which a good deal of thin white discharge arises. The smell arising from the parts is very offensive.

Right foot.

This is very little affected; the first joint of the great toe dropped off about ten days ago, and the one next to it is nearly off.

General health.

Much emaciated; countenance pale; lies in bed; appetite good; feels thirsty at times; tongue furred; slight tenderness on pressure in the right hypochondriac region.

Poultices, made of linseed meal and moistened with beer grounds, are applied to the feet. The nitric acid wash is also employed. He takes the following medicine regularly:

Pulv. Cinch. ʒj.
Tinct. Ejusdem ʒj.
Decoct. Cinch. ℥ ij. ter die.
Pil. Saponis cum Opio. gr. v. omni nocte.

Is allowed six ounces of wine, a pint of porter, and three-quarters of a pound of meat a day.

Jan. 28th. The foot was this morning removed by dividing the tendons which had supported it.

Feb. 10. The granulations at the lower part of the left leg appear quite healthy. The right leg and foot have been swollen lately, but they have resumed their natural size.

PHRENOLOGY.

THE opponents of Phrenology, from the moment of THURTELL's execution, have been unceasingly showering their pointless arrows at the supporters of this science, and in the daily papers have appeared the most silly accounts of the above criminal's cerebral configuration. The maudlin arguments advanced by these would-be philosophers, are of the most ludicrous description, and betray a total ignorance of that doctrine which they constantly, yet vainly, endeavour to refute. They assert that the head of THURTELL

is entirely destitute of the organ of destructiveness—that those organs are not at all developed, and that his moral character therefore was totally opposed to his craniological form. The opinion respecting the non-existence of the destructive organs appears to have arisen from a belief entertained by certain individuals who *profess* to be acquainted with Phrenology, that each cerebral organ, when largely developed, is marked by a corresponding protuberance of the skull, and unless there be a manifest projection at the part where the organ is said to be situated, they altogether deny its existence; nothing, be its form what it may, less than a decided *bump* will satisfy them, whether circular, quadrangular, hexangular, or octangular; no matter, let there be a *bump*, a sort of cerebral hernia, all is right, and the wiseacres are convinced. Now they are pleased to denominate this a part of the phrenological system,—ay, its distinguishing feature, the principle upon which the doctrine is founded,—the test by which you can discover its truth or falsehood; with many other observations, equally remarkable for their want of veracity. It is really astonishing that authors who have just claims to literary and philosophic fame should sacrifice or blur their dearly-won reputation by such inconsiderate assertions, for it is evident they have assumed the right of writing upon a subject which they do not comprehend, and of denouncing it, without having investigated its principles.

These persons ought not to be confounded with phrenologists. We will therefore, for the future, speak of them under the name and title of *Bumpists*, which appellation is well calculated to illustrate their unfounded pretensions to a knowledge of the phrenological science.

We are at a loss to conceive from what source this bump doctrine could have emanated,—certainly not from any thing contained in the works of Drs. Gall and Spurzheim, for they unhesitatingly and broadly declare, that they can describe a character more correctly by looking at a cranium, than by feeling it,—by observing its general appearance, rather than by confining their remarks to any particular situation.

Indeed, it is impossible for the phrenologist to speak with the slightest accuracy of the intellectual peculiarities of any individual, unless the entire head be submitted to his inspection; for it is by comparing the length of one part to the shortness of another,—the width here, to the narrowness there,—the quantity of brain anterior to the meatus auditorius, in comparison to that situated posteriorly, and other similar considerations, which enable him to form correct conclusions; and not even then, unless *his own* intellectual mansion be tolerably well constructed, together with the addi-

tional indispensable requisites, of having devoted to the subject much time and attention.

We have been induced to make these remarks in consequence of the incorrect statements and absurdities which have been so repeatedly published respecting the head of Thurtell; the accurate dimensions of which are now for the first time presented to the world. The phrenologist, (and we do not give it for the gratification of groundlings,) in the measurement of this criminal's cranium, will discover the most decided evidence confirmatory of the system he advocates. The dimensions were taken immediately after the body was brought to St. Bartholomew's Hospital, and Mr. De Ville, of the Strand, has since compared them with the cast which he took a few hours after the execution; this gentleman is so well versed in these matters, that we can pledge ourselves to their accuracy.

CORRECT MEASUREMENT OF THURTELL'S CRANIUM.

[Each organ measured from its centre with a pair of Callipers.]

		INCHES
From No. 6 to 6,	Destructiveness to Destructiveness	6 3-8ths
2 to 19,	Philoprogenitiveness to Individuality	8 1-8
7 to 7,	Constructiveness to Constructiveness	5 3-8
8 to 8,	Acquisitiveness to Acquisitiveness	6 2-8
9 to 9,	Secretiveness to Secretiveness	6 3-16
16 to 16,	Ideality to Ideality	5 3-8
12 to 12,	Caution to Caution	6 1-8
5 to 5,	Combativeness to Combativeness	5 4-8

[The remainder are measured from the Meatus Auditorius Externus to the centre of each organ.]

From Meatus Auditorius Externus to 19	Individuality	5 4-8
Meatus Auditorius Externus to 2	Philoprogenitiveness	5 2-8
Meatus Auditorius Externus to 30	Comparison	6 1-8
Meatus Auditorius Externus to 31	Causality	5 5-8
Meatus Auditorius Externus to 32	Wit	5
Meatus Auditorius Externus to 13	Benevolence	6 3-8
Meatus Auditorius Externus to 14	Veneration	6 2-8
Meatus Auditorius Externus to 18	Perseverance	6 2-8
Meatus Auditorius Externus to 33	Imitation	5 5-8
Meatus Auditorius Externus to 15	Hope	5 3-8
Meatus Auditorius Externus to 17	Conscientiousness	5 2-8
Meatus Auditorius Externus to 10	Self-esteem	6
Meatus Auditorius Externus to 11	Love of Approbation	5

We will now give a comparative measurement of the organs of destructiveness, in five other murderers:—1st, Keppel, who killed his aunt, Mrs. Richards, of Clapham; 2nd, Johnson, who was hung at the last York Easter Assizes, for murdering a man near Beverly; 3d, Bridget Ennis, who was executed at Edinburgh about the same time that Johnson was at York; 4th, Liscombe, executed at the Devon County Jail, for the murder of a young woman, and who, before he was hung, acknowledged having committed three other murders; 5th, Bellingham, who shot the late Mr. Perceval.

From Destructiveness to Destructiveness	Keppel	Johnson	Bridget Ennis	Liscombe	Bellingham	John Thurtell
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
	6 1-8	6	6	6	5 5-8	6 3-8

So much for the Phrenological knowledge of the *Bumpists*.

It is a curious fact, that out of forty-three executed criminals in Mr. De Ville's collection there are only five heads having the organs of destructiveness more largely developed than Thurtell's; and the remainder are much less, some of them even three-quarters of an inch.

If the accuracy of the measurements which we have given should be doubted, all persons have an ample opportunity of satisfying their scruples, by paying a visit to the admirable collection of Mr. De Ville, which, to the phrenologist, will prove a prolific source of intellectual gratification and improvement.

On the Efficacy of Ammoniacal Injections in Amenorrhœa, by Dr. Francesco Lavagna.

[From Omodei's Annali Universali Di Medicina.]

If we consider the different medicinal substances which compose the list of supposed emmenagogues, and the consequences which generally follow retarded or suppressed menstruation; if we examine the mode in which these substances act on the human body, it will be readily perceived that the animating influence of love, and the physical effects of a rational indulgence of the desires by which the species is reproduced, corresponds with the practical views by which we are guided in the treatment of amenorrhœa. This important fact did not escape the observation of Aristotle* and Hippocrates†, and there is hardly any physician, however limited his practice, to whose lot it has not fallen to observe young females, who, at the age of puberty, were dull, languid, pale, and labouring under scanty menstruation, suddenly restored to bloom, animation, and vigour, and to the accustomed salutary sanguineous evacuation, by an opportunity being afforded them of participating in conjugal duties. Whenever I reflected on this fact, and considered the numerous cases by which it was established, I never doubted that any stimulating medicine which might have the effect of determining an increased sanguineous afflux to the matrix would succeed in exciting suppressed menstrual evacuations. Under this impression I determined to make a trial of liquid ammonia in cases of amenorrhœa. This highly stimulating volatile medicine, added to warm milk or any other fluid, if injected in a

* Coitus viam faciliorem mensibus facit. Aristot. De Generat. Animalium, lib. 3, cap. 1.

† De Natura Mulier., s. 34.

suitable quantity into the cavity of the matrix, or along the canal of the vagina, is calculated to produce a sensation of orgasm, similar to that which is known to be most favourable to the cure of suppressed menses. I was the more confirmed in this opinion, when I reflected that the celebrated SWEDIAUR had been able to bring on the symptoms of blennorrhagia by injecting liquid ammonia into the urethra; that irritating substances directed to the pituitary membrane have produced a secretion of the mucous fluid, and that the sanguineous secretion of the matrix is effected by a mechanism analogous to that of the glands of the living system, as has been observed by BORDEAU. The three first patients on whom I tried the liquid ammonia were females labouring under suppressed menstruation, attended with symptoms indicating a general state of debility, namely, paleness of the countenance, weakness in the limbs, anorexia, and difficulty of breathing under any increased exertion.

CASE I.—A lady, twenty-seven years of age, who had for some time laboured under symptoms of hectic, attended with general debility and spitting of blood, had observed no menstrual discharge for three months. She injected four times a-day into the vagina from ten to twelve drops of liquid ammonia added to two table-spoonfuls of warm water, which produced every time an unpleasant sensation in the parts. On the fourth day she felt pain in the region of the loins, and soon after the menses appeared, and from that time flowed regularly for three months at the accustomed periods. The spitting of blood did not disappear with the return of the menstrual discharge, and it is probable, therefore, that it had no connexion with the suppression. (*Vid.* Hippocrat. Aphor. 35, lib. 2.)

CASE II.—A country girl, about eighteen years of age, had laboured under scanty menstruation for five months, and when I saw her, the discharge had been suppressed for the last three months. She was extremely pale, languid, and melancholy; her pulse was weak, but she had no fever. She injected the liquid ammonia, and in two days the menses appeared, and she soon recovered her appetite and muscular strength. The discharge has returned regularly at the accustomed periods for two years.

CASE III.—A widow, thirty years of age, had been afflicted with amenorrhœa for three months. Her countenance was pale, her pulse could scarcely be felt, and she was labouring under general symptoms of debility. She injected the ammonia, increasing it by a few drops every day, until she felt an unpleasant sensation in the vagina; the discharge appeared at the end of six days, continued for three days, and afterwards returned regularly.

Hitherto my experiments were successful, but they were applied only to cases of amenorrhœa, in which the disease appeared to arise from want of tone in the matrix, accompanied with a general state of debility. To such cases, it will perhaps be said, my experiments ought to have been limited; for in such cases alone, according to the modern doctrines, can stimulating remedies produce any beneficial effect. I was determined, however, to try the ammonia in cases in which the suppression of the menstrual discharge seemed evidently to be connected with excessive action in the whole system. The result will appear from the following cases:—

Case IV.—K. G., of Porto Maurizio, a widow, about thirty years of age, of sanguine temperament, had laboured under scanty menstruation for some months; and the period of the discharge was just approaching when she was admitted into the hospital. She had a difficulty of breathing, her face was extremely red, and she felt a sensation of weight in the region of the stomach; violent pains in the head and limbs tormented her continually; she complained of excessive heat all over the surface of the skin. Her pulse was hard and tense, but she had not much fever. I directed bleeding from the arm, which mitigated the violence of the symptoms, and a few drops of menstrual discharge appeared on the following day, but the suppression was complete towards the evening. The next day all the above symptoms returned with increased violence, and I then prescribed the liquid ammonia, the beneficial effect of which was rapid beyond my expectation. At the third injection the menses appeared, with immediate relief to the patient; they continued to flow for two days, and on the following day the patient left the hospital well.

Case V.—A young woman aged eighteen, of a strong constitution, had a scanty menstrual discharge for the last four months, and at length a total suppression. When I saw her, not a drop of blood had flowed for two months. Her face was extremely red; she had severe pains in the head; the belly was swelled, pulse hard, but she had no fever. She used the ammoniacal injection six times in one day, without any benefit, probably because a sufficient quantity of ammonia was not employed. I advised her to increase the number of drops till she felt an unpleasant sensation; and after four injections, in one day, the menses appeared, being preceded as usual, by pain in the lumbar region. They stopped, however, towards noon; I advised her to resume the injection, and having used it four times in the course of fifteen hours, the discharge returned, and continued for thirty-six hours,

to the great relief of the patient.

Case VI.—A lady, aged 22, of a sanguine temperament, had been afflicted with amenorrhœa for several months. Her belly was swollen, her nipples turgid, countenance red, pulse not feverish, but full and strong, and her appetite had almost entirely left her. Bleeding, purgatives, steel, savin, &c., had been tried without effect. I advised an injection of liquid ammonia, but she would not consent to use such a remedy, and placed herself under the care of the surgeon, who prescribed various medicines without the slightest advantage. About a month after, she returned to me; I then insisted more than ever on the ammoniacal injection, which she used three times in one day just before the period of the menstrual discharge. She felt an unpleasant sensation; the menses appeared on the following day, continued to flow for four days, and all her morbid symptoms disappeared as if by a charm. This lady is still subject to a scanty menstrual discharge, and when this happens the same symptoms return, but they are instantly relieved by the injection, which she now uses without consulting me.

Case VII.—A country girl, aged twenty-eight, of a robust constitution, laboured under suppression of the menses, accompanied with severe pains in the head, anorexia, &c. She used the ammoniacal injection only twice, when the discharge appeared, continued for three hours, and the pains in the head, with the other symptoms, were removed. The effect of the injection was so rapid in this case, that I almost doubted whether the girl, who had evinced a great reluctance to use the remedy, had really employed it; I, however, fairly satisfied myself of the fact, as I have since done in several other cases*.

Case VIII.—A young woman, about twenty-six years of age, had been deprived of the periodical discharge for a year. Soon after the suppression she was attacked with epileptic fits, of which she had usually one or two every week. She tried the ammoniacal injection for eight or ten days, without any effect; I then recommended her, instead of injecting four or five times a day, to inject regularly every hour for five days consecutively, although each injection might be followed by considerable heat in the parts. At the end of the fifth day she was attacked with pain in the region of the matrix and loins, and in the night a copious discharge came on, attended with pain. The pain was felt more or less severely for a day; it then

* "Colsi quinelli un pretesto, (says the Italian practitioner,) per assicurarmi bel bello del fatto, *siccome feci poscia in altre donne.*" Dr. Lavagna does not forget to add '*giuniore*' to the other recommendatory designations in his title-page.—Ed.

ceased, and the discharge continued to flow copiously for six days. During the time of the discharge, instead of the epileptic fits, she had only a slight tremor of the right arm. I flattered myself that she would get rid of her epilepsy, but at the time I am now writing, eight months have elapsed, and though the menstrual discharge has continued regular, the patient is subject to epileptic fits, though at longer intervals than before.

I have stated candidly these simple facts, which I think sufficiently establish the efficacy of this new remedy in cases of suppressed menstruation. I could cite a great number of similar cases, but I prefer giving a few in which this remedy has been tried, in consequence of my recommendation, by a surgeon of great ability, Signor Dellerba.

Case IX.—A lady, twenty-two years of age, had been deprived for eight months of her periodical evacuations, which were suddenly suppressed in consequence of a fit of passion to which she imprudently gave way, while her menses were flowing. Her complexion, which was highly florid, became almost instantly pale; she was soon after seized with rheumatic pains in various parts of the body, and when I saw her she laboured under difficulty of breathing. Warm bathing, bleeding from the foot, and various supposed emmenagogues, steel, myrrh, aloes, saffron, galbanum, and assafœtida, were tried without effect. I then determined to try the effect of the remedy you had suggested in similar cases, namely, the injection of liquid ammonia into the vagina. The first injection produced an intolerable heat; but this soon subsided into a moderate itching; on the seventh day the menstrual discharge appeared, and continued to flow for two days. I discontinued the injections, with a view of repeating them at the end of three weeks. I resumed them at that time; the discharge appeared in six days, and has since regularly returned.

Case X.—A girl, of scrofulous habit, had observed no menstrual discharge for five months. When I saw her, she had a scrofulous tumour in the neck, which had gradually increased since the suppression of the menses. Her countenance was of a high red colour; she had constant pains in the head, and felt a sense of coldness in the lower extremities. I recommended her to bathe her feet in warm water, and to use the ammoniacal injection several times a day. I desired her mother to bring her to me again in a few days, but I never saw the girl afterwards. The mother, however, came to me some time after, and told me that her daughter had used the injection, though with some reluctance, in consequence of the heat and pain it had first occasioned; and

that, in ten days, she obtained the periodical secretion from the matrix.

Case XI.—A young woman, of robust constitution, about eighteen years of age, had laboured under a suppression of the menstrual discharge for about eighteen months. After trying various emmenagogues without effect, I advised her to try the ammoniacal injection. It produced such severe pain at first that she was unwilling to continue its use. I found it necessary to diminish the strength of the injection by adding a further quantity of distilled water. Even this injection produced an unpleasant sensation, and raised little pimples along the canal of the vagina. She persevered in the remedy, however, and at the end of a fortnight the menses appeared, and have since continued to flow regularly.

Case XII.—A robust widow, aged thirty-one, had been deprived of the customary uterine discharge for eight months. Her belly was somewhat tumid, and her respiration difficult; her pulse was not feverish, but rather yielded to the pressure of the finger.—She used an injection of ammonia in warm milk, and in a short time the menstrual discharge appeared, and has since regularly returned.

Case XIII.—A girl, of about twenty-four years of age, of irritable habit, and leading a sedentary life, had been deprived of the menstrual discharge for three months. Her bowels were costive, her appetite bad, pulse somewhat quick, and she had occasionally fits, followed by great prostration of strength. Bleeding from the foot, and various medicines, were tried without effect. I recommended warm bathing, an active life, and the continued use of ammoniacal injections. A very few injections, however, were sufficient to bring back the menstrual discharge, after which the fits, and all the bad symptoms, disappeared.

Case XIV.—A girl, about twenty years of age, of robust constitution, had laboured for about a year under a suppression of the menstrual discharge. Her mother attributed it to her having bathed in cold water a few days before the time when the menses usually appear.—From this time she became pale, melancholy, and afflicted with constant head-ach. I did not see this patient, but I desired her mother to try the ammoniacal injection. Her mother came to me some time after and said, that a few drops of blood appeared after the second injection, but though she had regularly continued it, no other effect had resulted from its use. It is probable in this case, that the ammonia lost its stimulating properties, in consequence of the phial containing it being badly stopped.

Signor Dellerba proceeds to state that he might mention many other cases in which this

remedy had been successfully employed, and some also in which its use had not been attended with any beneficial effects. In the latter, however, he suspected either that the patients had not continued its use long enough in consequence of the pain it produced, or that they had not introduced the syringe far enough into the vagina, or lastly that the ammonia had not been kept in a close vessel. If the efficacy of this remedy depends upon the stimulating properties of the ammonia, it would follow that other substances of the same nature thrown up the canal of the vagina would produce similar effects. This idea occurred to Sig. Novara, an able surgeon, and he accordingly recommended a lady, whose menses had been suppressed for four months, to inject frequently warm white wine into the vagina. The lady followed his advice, and at the end of five days the menstrual discharge appeared, and has since regularly returned.

If, continues Dr. Lavagna, we consider the preceding facts and observations, it will appear to be sufficiently evident that ammonia is capable, in almost all conditions of the general system, to restore the sanguineous evacuation from the female organs of generation, and to remove all the morbid symptoms which commonly attend its suppression.—This is a fact of no slight interest and importance, when we reflect on the inefficacy of the different medicines which have been hitherto employed for that purpose. Indeed the suppression of the menstrual discharge has been always regarded as one of the *opprobria* of medicine, for the cure of which the three kingdoms of nature have been ransacked in vain. The celebrated Astruc was well aware of this, when he observed that attempts to restore this secretion by medical art, have almost always been unsuccessful—*provoquer l'irruption menstruelle est une opération difficile, presque toujours infructueuse, et les succès en sont très rares.* It is with no slight degree of satisfaction, therefore, that I am able to say that the remedy which I now propose is simple, safe, and almost always crowned with success. I have only found it fail in two instances, in both of which I had reason to suspect, from the great pain experienced by the patients in the region of the uterus, that there existed some organic disease.—There is another state of the matrix in which ammoniacal injections would be unavailing and injurious, which is, when the suppression of the menses is attended with, or produced by, inflammation of that organ. With this exception, however, and that of organic disease in the organ, such as scirrhus, steatoma, &c., which are too often incurable by any medicines, ammonia may be employed with a well-founded hope of success in every case

of diminished or suppressed menstruation. It is necessary to introduce the syringe a considerable way up the canal of the vagina, and the injection must be of sufficient strength to produce a moderate degree of heat in the uterus, or near the neck of the vagina.

All the remedies which have been hitherto employed in amenorrhœa, have been taken from the class of stimulants; as for instance, electricity, and the warm bath, all the aromatic substances, and bark in the vegetable world; castor and musk in the animal; and iron in the mineral world. There can be little doubt indeed, that retarded or suppressed menstruation arises from diminished excitability in the matrix, whatever may be the pathological state of the general system. This secretion is diminished by defect of re-action, by mechanical obstructions, or by inflammation in the secreting organ, which indeed may be classed among mechanical obstructions; and, on the other hand, it may be augmented by the application of stimuli, in the same manner as friction of the mammæ, or testicles, increases the secretion of milk or semen; or as motion of the jaws will increase the secretion of saliva, or stimuli applied to the intestines, as in dysentery, produce a secretion of mucus.—Hence, causes which depress the general system, and especially that of the generative functions produce amenorrhœa. Every thing which heats the body—as the use of coffee, aromatics, spirituous liquors; every thing which inflames the imagination, and awakens sensibility, accelerates the period of puberty in the female; and by increasing the energy of vital action in the matrix, produces an increased* sanguineous evacuation. Love has a powerful influence on the secretions of the organs, concerned in the process of reproduction, in both sexes. Sarrasin observes that the testicles of the Canadian rat increase, as the period approaches at which it is impelled to the re-production of its species, and diminish afterwards. The females of some animals discharge a sanguineous humour from the parts of generation when they are at heat. Lastly, we observe that in women, who abandon themselves too freely to the pleasures of love, the discharge returns within shorter periods. The remedy which is most efficacious in amenorrhœa cannot in many cases be recommended without offending modesty, morality, and religion. This was the principal reason which induced me to search for a remedy which might produce in some degree the same effects as the indulgence of the sexual

* It is a well known fact, observes Dr. Lavagna, that in Holland the women often become cachectic, in consequence of the great increase of the menstrual evacuation, produced by a habit of sitting in winter with their legs placed in a particular manner over the fire.

passion. The internal medicines administered in this complaint are generally either useless or pernicious. It has been well observed by Pasta that he never yet met with any emmenagogue, however much it might have been celebrated, to which any efficacy could be fairly attributed. The benefit to be derived from this class of medicines is very doubtful, while the risk which attends the employment of many of them is very considerable. After the facts and observations which I have submitted to the reader, I trust there will hereafter be no necessity for resorting to internal medicines in the cure of amenorrhœa. The cure is to be effected by the application of a stimulating remedy to the seat of the disease; ammonia appears to me to be preferable to all other substances for this purpose, and its beneficial effects will be most speedily produced by repeating the injections at short intervals, so as to keep up a state of constant excitement in the parts until the discharge appears.

The Case of C. A. DEMPSTER, *who swallowed a Case-Knife.*

This unfortunate man died at Middlewich, on Friday, 14th Jan. 1824. The public will recollect that in attempting some juggling tricks at Carlisle, he swallowed a table-knife rather more than nine inches long, which remained in his stomach without exciting any very acute pain, or producing any serious consequence until within a few days of his death. He left Carlisle with the intention of proceeding to London, where his mother resides, for the purpose of consulting Sir ASTLEY COOPER. During the journey to Manchester he suffered much pain from the jolting of the coach; when finding himself unable to bear the motion of the carriage, he embarked in a canal boat, but being taken very ill in the boat, he was prevented from pursuing his journey further than Middlewich. This case having excited considerable interest in the public mind, as also in that of the profession, it may be proper to observe, that the body was opened the day after his death, and the knife found in the stomach, which, with the other viscera, was in a state of inflammation and gangrene. The handle of the knife (which was of bone) was dissolved, as likewise a considerable portion of the blade; so powerfully, indeed, had the knife been acted upon by the juices of the stomach, as to impress very forcibly on the minds of those who opened the body, a belief, that had the man continued at Carlisle, and been kept in a quiet state, the whole of the knife might have been dissolved, and the case have terminated favourably. The public prints having stated that Sir ASTLEY COOPER had recommended an

operation for extracting the knife, we deem it but justice to the above-mentioned gentlemen to state, that they saw the man only about three hours prior to his death, when inflammation and mortification had already commenced.

LECTURE XXX.

Of Inguinal Hernia in the Female.

This disease is of less frequent occurrence in the female than in the male, in consequence of the smallness of the parts through which the ligamentum rotundum descends. The abdominal ring is small, the passage of the ligamentum rotundum from the abdomen much less than in the male, and the inguinal canal upon the whole less. Hernia in the female is therefore comparatively rare. When it occurs, the course which it takes is similar to that of inguinal hernia in the male, comparing the ligamentum rotundum in the former case to the spermatic cord in the latter. It begins midway between the spine of the ilium and the symphysis pubis; its origin being situated on the external side of the epigastric artery. It then enters the inguinal canal, passes along the canal, under the internal oblique and transversalis muscles, till it reaches the abdominal ring, where it emerges. Hernia in the female is commonly small, especially in the labia; the sac is much more considerable above the abdominal ring than below it. On this account there is considerable difficulty in the performance of an operation for this hernia. When you dissect a hernia in the female, you will find, immediately below the labia, a fascia covering the hernia similar to that in the male: the abdominal ring gives off a fascia which descends into the labia. When the hernia is reducible, it requires a truss similar to that used for the male; as it is generally small, it will give way to pressure after about a twelvemonth's use, but it will be right to continue the truss for two years longer. Inguinal hernia is more commonly reducible in the female than in the male; in fact, I have never seen an instance of irreducible hernia in the female. If you should meet with one which contained omentum, you should endeavour so to apply the truss as to promote absorption of the omentum, and produce an adhesion between it and

the internal part of the sac. When, from the gurgling noise, you ascertain that intestine has descended, it will be desirable that a truss should be constructed with a hollow in the pad, so as to embrace the hernia and prevent the increase of its bulk, while at the same time it does not make such a degree of pressure as to give any interruption to the passage of the fæces. When this hernia is strangulated, the operation for it differs in some respects from that required for inguinal hernia in the male. When you have made your incision upon the hernia below the ring, you will find that the peritoneal bag does not contain either intestine or omentum, and that nothing but a little water escapes. This leads you to slit up the abdominal ring, and on putting your finger within it, you will find something contained within the sac, above the ring; this is generally intestine, but sometimes a portion of omentum descends with it. All the cases of inguinal hernia in the female which I have seen, have been intestinal. Having divided the tendon of the external oblique, you will find a convolution of intestine has descended, and you will then look for the stricture, which you will generally find about two inches above the abdominal ring. In the male, the inguinal canal is considerably shortened by the approximation of the upper to the lower opening; but in the female the canal undergoes little alteration, and you will in general therefore find the orifice of the hernial sac at the distance of at least two inches from the abdominal ring. Having slit up the tendon of the external oblique from an inch to an inch and a half, and directed your assistant to draw it up, you will put a director within the sac, feel for the stricture, and dilate it upwards or outwards towards the spinous process of the ilium. The general rule is to divide it upwards, but it may be divided outwards with safety, as there is no danger in this case of cutting the epigastric artery, which is on the inner side. The last case of strangulated hernia, in the female, which I saw at Guy's, was one under the care of Mr. Forster, and it was a very embarrassing one. When Mr. Forster had made his incision below the abdominal ring, he was surprised at observing a gush of water; and finding no appearance of

either intestine or omentum, he doubted at first for a moment whether the disease was any thing more than a cyst containing water; but on insinuating his finger into the abdominal ring, which he did with some difficulty, he found a considerable bag above it. Upon slitting up the abdominal ring, and the tendon of the external oblique towards the spine of the ilium, he found a very small convolution of intestine embraced at the orifice of the hernial bag, which was the seat of the stricture. He introduced a director, dilated the stricture; and this patient did extremely well. In this hernia, it is to be recollected that the stricture is, in almost all cases, at a very considerable distance above the abdominal ring. I am not aware that I have any other observations to make on this disease, as it occurs in the female, and I shall proceed therefore to the consideration of

Congenital Hernia.

This, as you are aware, is usually hernia of the tunica vaginalis testis, but it does not always happen that hernia of the tunica vaginalis is congenital; it sometimes appears in the adult. The way in which it takes place may be thus explained:—The tunica vaginalis is open to the abdomen a little prior to birth, so that a portion of intestine is very readily admitted into this part. It scarcely ever happens in the young subject that any thing but intestine is contained in hernia of the tunica vaginalis, the omentum not reaching so low as the orifice. If the tunica vaginalis is not closed immediately after the birth of the child, a hernia will make its appearance. The appearance of this hernia is well known to nurses; they make a distinction between what they call a watery and a windy rupture. Now what they call a watery rupture is hydrocele, which not uncommonly takes place in very young children; and what they term a windy rupture, is hernia congenita. The former is quite transparent, and, if not congenital, is incapable of being returned into the cavity of the abdomen; the latter may be returned into the abdomen, and in so doing you will hear a gurgling noise. It sometimes happens that the tunica vaginalis, though not closed, will not admit of the descent of a portion of intestine, because the orifice is extremely small, and the person will arrive at

the age of from 20 to 30 years before the hernia appears. The descent of a small convolution of intestine is then generally the effect either of relaxation or of some sudden or disproportioned exertion. There is a specimen in the collection of a tunica vaginalis open in the adult; the opening is sufficient to admit a large bougie, but it does not appear that the person from whom it was taken ever had hernia. When you meet with a case of hernia of the tunica vaginalis in the adult, and you ask him how long he has had hernia, he will tell you for a very short time—from a week or ten days to two or three months, but that he is perfectly sure he never had it when a child.

When intestine or omentum has descended into the tunica vaginalis, reaching to the lower part of the scrotum, the testicle is involved in the swelling, so that it cannot be distinctly felt. This is a distinguishing mark between congenital hernia, or hernia of the tunica vaginalis, and common hernia; the former is much more concealed and buried in the surrounding parts. In the latter, the coverings of the hernia, namely, the fascia of the cord and the cremaster, are thin; but the tunica vaginalis being thicker than the peritoneum, the parts are not so readily distinguishable in hernia of the tunica vaginalis as in the common hernia. The testicle is, besides, considerably diminished in size in the latter species of hernia, in consequence of the pressure on the sac preventing the free circulation of the blood-vessels in that part. In hernia of the tunica vaginalis, the spermatic cord is not unfrequently altered in its direction, the artery and vein being on one side, and the vas deferens situated posteriorly in the outer part. Here is a beautiful specimen (exhibiting it to the class) illustrating this case. It not unfrequently happens, in this species of hernia, that the testicle does not descend completely into the scrotum, and the peritoneal sac descends lower than the situation of the testicle.

When the hernia is in a reducible state, and a child is brought to you whose testicle is situated above the abdominal ring, you should advise the parent on no account to apply a truss, but to let the hernia extend itself until it has gradually brought down the testicle into the scrotum, and then, and not till then, to apply a truss. Many years ago, a gentleman brought his child to me with

hernia, whose testicle had not descended, and asked me what was to be done. I told him, if a truss were applied, it would press upon the testicle, waste, and at length destroy it; but if the hernia were suffered to increase till the testicle was brought down into the scrotum, there was but little risk of its being strangulated in very young subjects, and when the testicle had descended, it would be the proper time to apply a truss. This gentleman brought his son to me when he was 19 years of age; his testicle had then descended, and a truss was applied, which kept it below the abdominal ring. I am happy to say that this patient, who now holds a distinguished situation, has taken to himself a wife, and produced to himself a numerous progeny. When you are therefore consulted under such circumstances, this is the plan, Gentlemen, which I recommend you to pursue. You will be consulted in cases of hernia congenita, as to the time at which a truss should be worn: a truss with springs may be applied when the child is three months old. The reason why a truss has not been applied sooner is, that the parts are kept in so wet a state that a truss is very speedily destroyed. However, this reason no longer exists; for an ingenious truss has been constructed by Messrs. Salmon and Ody; which may be worn almost immediately—within a fortnight at least after the birth of the child. The pressure should be extremely light; in general, you should recommend the parent, at first, to have a truss made in the form of the common spring-truss, without any spring. A pad, contained by a leathern strap, should be placed upon the hernia, fastened round the abdomen of the child; and another strap should be passed between its thighs. While the child is kept in the horizontal position in the arms, the hernia will, in general, be prevented from descending; and, at the end of three months, a truss may be borne with ease.

With respect to congenital hernia, in the irreducible state, I do not know that any particular treatment can be adopted different from that which is practised in the common inguinal hernia. The operation in strangulated hernia of the tunica vaginalis is more difficult than that in the common hernia, the parts in the former being more concealed and involved in thicker parietes than in the latter. When you make your incision on the sac, you

should take care not to open the tunica vaginalis low down, for two very obvious reasons: first, because you should always have sufficient tunica vaginalis to cover the testicle, to prevent any unnecessary irritation; and secondly, because the spermatic artery and vein are situated obliquely on the fore part, and you would be in danger of cutting through each of these. You should therefore leave three inches of the tunica vaginalis undivided below. In general a considerable quantity of water is found with the intestine in the tunica vaginalis, a much greater quantity than in the common hernia; because the tunica vaginalis is a more secreting surface than the peritoneum. In congenital hernia the stricture is generally about an inch and a half above the abdominal ring. When the hernia is very large, the seat of stricture will descend to within half an inch or an inch of the abdominal ring; but this very rarely happens. I have already endeavoured to expose to you the falsity of those statements which place the seat of stricture at the abdominal ring. Every surgeon, who has operated five times in inguinal hernia, and knows any thing of the anatomy of the human body and of practical surgery, must be aware that the stricture is hardly ever to be found at the abdominal ring. In hernia congenita, it is even less frequently to be found in that situation than in common inguinal hernia. If, therefore, a surgeon is called upon to operate for strangulated hernia, and expects to find the stricture at the abdominal ring, he is not fit to perform the operation at all; and if any of you were to state, in your examination at the College, that the abdominal ring was the seat of stricture, such a man ought immediately to be turned back. It is contrary to the truth; and every man, who has dissected the disease, and understands anatomy, must know it to be a most abominable error. I call it a most abominable error; because it necessarily leads to the most dangerous consequences in the operation for strangulated hernia. A man, who thinks that by slitting up the abdominal ring he can push the intestines into the abdomen, either fails in doing it altogether, or if he gets a portion of intestine within the ring, the stricture and all the dangerous symptoms of strangulation still remain. You will look for the stricture, therefore, in congenital hernia, at an inch or an inch

and a half above the abdominal ring, and directly opposite to the tendon of the transversalis muscle. I am not aware of any circumstance in this operation which differs from that adopted in the common inguinal hernia. When the intestine adheres generally to the tunica vaginalis, all you are to do is to divide the stricture and leave the intestine within the tunica vaginalis. If the adhesion is only in a particular point, you might cut through it; but you must not attempt to cut through any considerable portion of the tunica vaginalis, as you would run great risk of dividing the spermatic artery or vein. All you should do, after dividing the stricture, is to bring the edges of the wound together, and make them adhere; in this way you leave the patient as you found him, with his irreducible hernia, but relieved from the dangerous symptoms of strangulation. The patient should wear a laced bag-truss after the operation.

There is a particular species of hernia of the tunica vaginalis, of which I have hitherto seen but three examples; there are two specimens in the College, and one I shall now send round to you. This is an *encysted hernia* of the tunica vaginalis; and I shall endeavour to explain to you the way in which it takes place. The hernia in this case is very much concealed within the scrotum; a bag is situated within the tunica vaginalis, which is not formed by peritoneum, but is a cyst produced in the following manner:—Opposite to the situation of the abdominal ring adhesion takes place between the sides of the tunica vaginalis, and a pouch is formed leading into the tunica vaginalis. A stricture crosses the bag directly opposite to the abdominal ring, shutting it up; and as the intestine descends into the upper part of the bag, the adhesion becomes elongated, and at length a sac is produced. The case from which this preparation was taken I had an opportunity of seeing at the other hospital. The patient was under the care of Mr. Forster; he came to the hospital with symptoms of strangulation, but the hernia was extremely concealed. He was frequently persuaded to submit to the operation for strangulated hernia, but he constantly refused, and chose rather to die than to undergo the operation. On examination of the body after death, it was found that a cyst had formed, containing a convolution of intestine, which became strangu-

lated at the orifice, and was the cause of death. There was a quantity of water in the cyst; the stricture was just at the mouth of the adhesion in the tunica vaginalis.

Of Femoral Hernia.

Before I proceed to describe to you the operation for femoral hernia, I shall demonstrate to you on the dead subject the anatomy of the parts concerned in this species of hernia. The superficial fascia of the abdominal muscles is given off by the tendon of the external oblique, which descends upon the spermatic cord, and is united to the edge of the abdominal ring in its descent. This structure, which is of considerable density, is continued to the thigh, and forms a covering of femoral hernia. The absorbent vessels and superficial veins are kept within their boundaries by this fascia. From Poupart's ligament two portions of fascia pass upwards, the fascia transversalis and the fascia iliaca. In cutting through the fascia lata a second portion of fascia will be found to be given off from the back part of Poupart's ligament, which forms the sheath of the femoral artery and vein, which are separated from each other by a septum. The anterior crural nerve has no connexion with the sheath, but forms the boundary of the sheath on the outer side. It is into this sheath that femoral hernia descends. It begins to descend between the border of Gimbernat's ligament, which is the lower edge of Poupart's; the femoral artery being on the outer side, and the vein on the inner. The sheath becomes elongated when femoral hernia is produced, and it is turned over Poupart's ligament; so that the lower part of the hernia is doubled on the upper part, and its mouth is just opposite the fundus or basis.

LECTURE XXXI.

At the conclusion of the last lecture, I described to you the parts connected with femoral hernia, and the course in which it descends; I shall now resume femoral hernia, show the operation for it, and conclude the subject of hernia.

When the peritoneum, which covers the femoral hernia, is protruded, it descends on the inside of the femoral vein, and is received on the inside of the crural sheath. Before the hernia protrudes, it elongates the sheath, which forms a covering for it. When femoral

hernia protrudes, it descends on the inside of the epigastric artery; and there is only the danger of wounding this vessel, in the operation of cutting upwards and outwards; recollect, then, that the epigastric artery is to the *iliac side* of the hernia. In the male subject, the spermatic artery crosses on the fore part of the tumour, but at such a distance from the place where the stricture is situated, that there is little danger of wounding it in the operation for femoral hernia. A man must be very badly acquainted with the nature of the parts, or the principle of the operation, to carry his incision so high up; there is no necessity for it; a very slight touch of the stricture with the knife will be quite sufficient to allow of the return of the parts. Remember, however, that on the fore part of the tumour, above Poupart's ligament, covered in the inguinal canal, is the spermatic artery, which ought never to be in danger of being wounded. On the inner side is situated Gimbernat's ligament; on the outer side are the femoral vessels; there is also situated near the mouth of the hernial sac, but to the outer side, the epigastric artery. The part through which femoral hernia protrudes, is the opening left in the *fascia lata*, to give passage to the absorbent vessels, and the vena saphena. The femoral hernia is not behind this fascia, but protrudes through the opening, and is then situated on its fore-part; the crural sheath is carried before it, becomes elongated, and always forms a bag for the hernia.

The appearances of femoral hernia are such as to require considerable knowledge to discriminate them from those presented by other complaints: it has the situation of bubo; in some subjects it is small and very little moveable, and projects very slightly. Femoral hernia may be confounded with other diseases, I assure you; therefore, all the circumstances connected with it should be particularly attended to. Now, Gentlemen if you dissect a femoral herna to ascertain the appearances that are to be found, you will see, first, after laying open the skin, a structure which I described to you in the last lecture, the *superficial fascia;* a few absorbent vessels will also be seen: in consequence of the pressure of the hernia, the fascia is distinctly observable to the eye, and is a structure of considerable density.

Secondly, when you have cut through this fascia, the sheath of the femoral vessels becomes exposed, [*fascia propria,*] forming a complete bag, so as to enclose the hernia, let its size be what it may. Here is a femoral hernia (*exhibiting a specimen to the class*) with a sheath covering it, and which may be easily separated from its surface. Thirty years ago I did not know of the existence of this structure. Mr. Weston, a gentleman to whom I am indebted for a great many opportunities of pursuing morbid anatomy, sent for me one day to examine a person who had died of strangulated femoral hernia. After dissecting through the superficial fascia, I thought that I was come to the peritoneal sac. I cut through this structure, it was of considerable density; but on examination I found it was not the peritoneum, but the crural sheath; I then arrived at the peritoneal sac, after having first cut through the integuments, superficial fascia, and crural sheath; and in this subject I first became acquainted with the existence of this covering to femoral hernia. After having cut through the superficial fascia, in operating for femoral hernia, you will find in some subjects a quantity of fat. In the last case, Gentlemen, operated on at these hospitals, after the opening was made through the superficial fascia, the surgeon said, "Here is omentum;" but on examining more particularly, he found that he had not opened the hernial sac, and then discovered that the substance mistaken for omentum was fat. There are two sacs of the same form covering femoral hernia; the first consisting of the elongation of the crural sheath, the second of the peritoneal covering. Every case of femoral hernia will be found to have a bag or covering, formed of the crural sheath, except when the hernia has been so large that it has given way.—Year after year I have met with cases of femoral hernia, and never found one but had a distinct covering, formed by an elongation of the crural sheath. The peritoneal sac being exposed, an opening is to be made into it, and the finger introduced towards the cavity of the abdomen, to ascertain the seat of stricture. The finger sometimes cannot be got within the femoral ring, (at which point the stricture is situated,) and then a director merely must be used. Such is the difficulty in femoral hernia of getting any in-

strument beneath the stricture.

Femoral hernia is subject to very little variety. I have seen a case where the hernia had acquired such a size that the sides of the sac had given way, and it protruded to a great distance from Poupart's ligament. This only happens in those cases where the hernia is very large. Another variety is, when the obturator artery arises from the epigastric, and surrounds the sac. Dr. Barclay, a gentleman of great respectability in his profession, and possessed of extensive anatomical knowledge, was so kind as to send me a specimen of femoral hernia, in which the obturator, arising from the epigastric, passed over the front of the sac. But although the obturator not unfrequently arises from the epigastric, it rarely passes over the front of the hernial sac, but goes behind it to the obturator foramen. Another case of this kind fell under the notice of Mr. Wardrop, whilst travelling on the Continent. Excepting these varieties, I have met with no other; the course is the same. Other varieties have been said to occur, but I have never met with them, nor do I believe they are ever found.

Now, Gentlemen, we shall proceed to speak of the treatment of femoral hernia; and first, the

Treatment of Reducible Femoral Hernia.

The truss required for this kind of hernia is different from that which will do in inguinal hernia.

The pad should be at right angles to the spring, placed lower down than in inguinal hernia, so as to cover the crural sheath, and the space through which the hernia protrudes.

The truss I mentioned in the last lecture is sometimes used, but it does not answer quite so well as the truss I have just alluded to, as it is likely to rise from its place. The truss that ought to be worn is a right-angled truss, *i. e.*, with the pad at right angles to the spring. But I must state to you, that femoral hernia is rarely cured by the application of a truss; it is right that I should recommend this plan of treatment to your attention, and that it should, in some cases, be steadily persevered in; but generally speaking, it fails to accomplish the object in view; and the reason is this, that Poupart's ligament supports the pressure of the truss, and

great strength is required, so that the truss shall bear on the hernia. I have seen a child of two years old have a truss applied for femoral hernia; it has been steadily worn till it was twelve years of age, when the hernia was in the same state as before the application of the truss. A truss, however, should be worn, to prevent the farther descent of any of the parts, but the result is generally less successful than in inguinal hernia.

Irreducible Femoral Hernia. In this complaint, it will be right to wear a truss, as I mentioned on the last evening, with a hollow in the pad, so as to receive the hernia, and confine it. A gentleman, with an irreducible femoral hernia, containing omentum, consulted me. I recommended a truss, with a depression in the pad, so that the hernia should be received into a cup, and the sides of the sac be gently pressed. Two years after this, I saw my patient, and I inquired how his hernia was; he told me that I should be surprised to hear that it was quite gone. This I doubted: he went home with me, and on examination I found that by pressure on the sides of the hernial sac, most of the omentum had been absorbed, and that little remained. In the treatment of irreducible femoral hernia, the truss is to be applied, and if the hernial sac contains omentum, there will be a chance of its being absorbed.

Strangulated Femoral Hernia. The symptoms of this complaint are more urgent than those of strangulated inguinal hernia; and the reason is, that the orifice through which the femoral hernia protrudes is smaller, and the pressure consequently greater. The patient complains of more pain than in inguinal hernia, and rarely lives so long (if the stricture remain,) as a person under the same circumstances with the other kinds of hernia. I have known a patient die seventeen hours only after the hernia (femoral) had become strangulated. With strangulated inguinal hernia, I have known patients live a week; in femoral, they generally survive four days, if the stricture remain; but I have also known them die in so short a space as seventeen hours.

Suppose you were called to a case of strangulated femoral hernia, how would you proceed?—You would first resort to the taxis: the patient must

be placed on the bed, with the shoulders elevated, the knees bent at right angles to the body, and approximated to each other, so as to admit an arm only between; then you employ pressure on the hernia. The hernia is to be pressed directly downwards, in order to get it below Poupart's ligament; if you press it upwards, without having first done this, you will merely get it farther above the ligament. It must first be brought below the level of Poupart's ligament, and then kneaded between the fingers, and pressed upwards. The form of femoral is different, as I explained to you, from that of inguinal hernia. By this drawing (here the learned Professor drew a diagram of the state of the parts), you see that the body of femoral hernia is turned upwards and forwards over the neck and nearly at right angles to it above Poupart's ligament, and it would be mere folly to press it upwards till it has first been brought downwards, as the hernia would only be doubled the more on itself. Having failed in your attempt at the taxis, you employ the tobacco injection, bleed the patient, and use the warm bath. No time, however, is to be lost in femoral, as there is less chance of reducing it than in inguinal hernia. These means failing, you must resort to the operation; it is a case in which delay occasions much mischief.

I will now show you, as far as I am able, the operation for femoral hernia; but we shall not have the same advantages now as on the other occasion. Not having a femoral hernia to perform the operation on, I have introduced a piece of intestine under Poupart's ligament, and formed a hernia, which, I believe, will answer the purpose.

Operation for Femoral Hernia.

In operating for femoral hernia, you make the first incision in the course of Poupart's ligament, along the tumour, extending from one side to the other; the second you make at right angles to the first, towards the umbilicus, so that the two incisions resemble the letter ⊥ inverted: the angular flaps are to be next dissected off, and reflected, so as to allow of greater room. By this incision you expose the superficial fascia, which you next divide, and the hernial bag, called by some *fascia propria*, is brought into view. This is next cut through, and the hernial sac, or peritoneal cover-

ing, makes its appearance. I will relate to you a case which shows what happens when a person is unacquainted with the structure of the parts. Many years ago a patient had symptoms of strangulated femoral hernia, which required operation; I met with the medical man, the next day, who operated, and asked him how he had succeeded; he stated that he had great difficulty. The fact was, that he had not been aware of the existence of the crural sheath, which he had mistaken for the peritoneal covering, and that the hernia was returned into the abdomen together with its sac. The femoral vein was wounded in the operation, which also greatly confused the parts. The symptoms remained the same, and on the following day the patient died. On examination, it was found that the hernia had been returned into the abdomen, without the hernial sac ever being cut through; and this arose in consequence of the surgeon not being aware of the existence of the crural sheath.

The next point is to make an incision into the hernial sac, with the greatest possible care, and then introduce a director to ascertain the seat of stricture. Now, Gentlemen, having opened the hernial sac, and exposed the intestine, the circumstance to be determined is, in what direction are you to divide the stricture: there is only one mode that I would advise you to adopt in practice, and that is, divide the stricture directly *upwards* and *inwards*, a little inclined towards the umbilicus. I will first show you how the stricture is to be divided, and then point out the objections to the plan. After introducing the director, a bistoury, blunted at the point, is to be put on it, and placed against the stricture; in this way there is no danger of wounding the intestine. The bistoury is to be gently raised, and with a slight touch of the instrument, the fibres will give way, and the intestine readily return into the abdomen. But it has been recommended to cut in the direction of Gimbernat's ligament, towards the symphysis pubis; there will be no necessity for this, as the stricture is not situated at Gimbernat's ligament; it is never known to be there. The seat of stricture, in femoral hernia, is at the crural arch, just where the intestine leaves the abdomen; and when this is slightly divided, the stricture gives way, and by a little pressure the

parts are easily returned. I have known Gimbernat's ligament divided, under the supposition that it was the seat of stricture, whilst the stricture itself has remained undivided, and the patient died. This shows the folly of stating that Gimbernat's ligament is the seat of stricture. Whoever dissects a strangulated femoral hernia, will have an opportunity of learning this for himself. Surgeons will find that the division of Gimbernat's ligament will not liberate the stricture, that it will remain the same; and that the constriction is at the *crural arch*. There is a danger in operating for femoral hernia, where the intestines are doubled up on themselves. A case of this kind occurred once at one of these hospitals:—One of the gentlemen attending these institutions came up to me one day, and said that there had been an operation for femoral hernia, and that the intestine had been cut into; I inquired how this happened, and was informed, that the mouth of the hernial sac being divided, the parts did not return; the division was made still farther, and the knife was introduced two or three times; till at last, feculent matter came from the wound—the intestines having given way. I was aware that the opportunity for examining the part would soon arrive; one satisfaction at least that there is from a bad case, by which we may learn our faults, and gather information to guide us in similar cases. On examining this patient, it was found that two convolutions of the intestines had been cut by the knife, just at the mouth of the hernial sac, and that Gimbernat's ligament had been divided. Persons, who think the stricture is at Gimbernat's ligament, are grossly ignorant of its real seat, and I can scarcely tell how to express my contempt for those who resist the evidence of their senses. I have my feelings on the subject, other persons have theirs; but it is my duty to state to you my views on this complaint; if I did not relate the result of my experience, of what use has been my lecturing here for thirty-two years? and for what purpose have I attended hospital practice during the space of forty years? It is only the opportunities which I have had of watching disease that makes it worth your while to hear me, and that affords me pleasure in teaching you. (*Applause.*) I do not mention it to gain your approbation, but to en-

force on your minds that nothing will avail in practice but the *tact* which is gained at the bed-side of the patient, and that any thing else is of comparatively little importance.

Umbilical Hernia.

Umbilical is next to inguinal hernia in frequency, if not before it; it very frequently occurs, but whether more or less so than inguinal, I am not quite certain.—Umbilical hernia is very common in infants soon after birth, and to these cases will you be most frequently called. In adults, where there is great obesity, in pregnant women and children, this complaint is often found. In infants it will be soon recognised by the situation of the cord. Recollect the anatomy of the part, that there is an opening in the *linea alba*, and the peritoneum lines it internally. When a hernia takes place, this opening does not close; the peritoneum equally lines it with the other parietes of the abdomen: when the hernia, therefore, protrudes, the peritoneum is always carried before it, whether in youth or advanced age. When the hernia has been very large, I have seen one or two cases without the sac; not but that there was a sac at the beginning, but the hernia having acquired a very large size, the sac became lacerated or partially absorbed, and the intestine has been thrown in close contact with the skin. I have seen an umbilical hernia descend as low down as the upper part of the thigh. This kind of hernia is covered with a superficial fascia, which, however, often becomes absorbed. Umbilical hernia is subject to little variety either in form or size. Occasionally there are two bags of intestine, separated by a septum. A female came to this hospital with strangulated umbilical hernia, was operated on, and recovered.—Some years after she came again, with another hernia, a little below the spot where the first was, and was operated on again; it was found that there was a complete septum between the two. The upper hernial tumour was strangulated at first, the lower one the last time.

Treatment of Reducible Umbilical Hernia in Children.

The treatment to be pursued in children, is to apply one-half of an ivory ball on the umbilicus, and over this adhesive plaster, and a belt; the belt, however, will be of no use unless supported by straps

which come round the lower part of the belly and the thighs. A little waistcoat fastened by two strings will be of use.

Reducible Umbilical Hernia in Adults.

In adults, at the beginning, the plan of treatment should be the same as in children; but if by means of the ivory ball the hernia should not be returned within the opening of the umbilicus, a pad, covered with black silk, and fastened by adhesive plaster, is to be placed over the part. When the hernia is reducible, a truss should be worn. It will seldom effect a cure, and is often liable to shift its situation; but a truss should be worn, as it affords a shield to the abdomen, where the hernia is pendulous, and there is much obesity.

The truss that should be worn consists of two broad belts, which must come round and buckle on the abdomen. But as this is continually liable to change place; a narrow belt joined to the broad one should also go under the pendulous part of the belly.

Irreducible Umbilical Hernia.

A hollowed truss, on the same principle as the one employed in irreducible femoral hernia, should be worn in this complaint. It should be buckled round the abdomen, and if omentum be contained in the hernial sac, it will be likely to be diminished in size, and the danger of the sac bursting will also be prevented. In strangulated umbilical hernia, before the operation is resorted to, the tobacco clyster should be employed, as it has a greater effect in relaxing the muscles and taking away the cause of the stricture in this than any other kind of hernia. Suppose you were called to a strangulated umbilical hernia, how would you endeavour to return it? If it were small, by the hand alone; but if it were very large, you must take the bottom or flat surface of a wooden platter, lay it on the abdomen, and press on it. (Here the learned Professor showed the mode of doing it, which excited a smile throughout the class.) When the pressure has been kept up for some time, the orifice at the umbilicus becomes dilated, and the hernia returns. If the hernia is large, the means just mentioned must be used; if small, employ the taxis as in inguinal hernia.

Operation for Umbilical Hernia.

Of all operations for hernia,

this is the most simple and most easily performed; but it is not one of the most successful—there is the difficulty of obtaining a flap of skin to close the opening. The plan you are to adopt in operating, is to make first an incision across the tumour, and then another at right angles, so that the whole is like the letter ⅃ inverted. The integuments being thus divided, the corners of the incision are turned to one side, by which means the hernial sac is brought into view. This being carefully opened, the finger is to be passed to the orifice of the sac, at the umbilicus, and a blunt-pointed bistoury introduced on it. The stricture is to be divided upwards, in the direction of the ensiform cartilage. Having returned the intestines, the parts are to be brought together, and a flap formed from above to cover the opening. If adhesion of the sides of the wound can be effected, the danger of peritoneal inflammation will be lessened. Dossils of lint and adhesive plaster are to be applied over the wound. The after treatment is the same as for other herniæ.

Ventral Hernia.

I do not know that there is any thing in this kind of hernia requiring a distinct notice. When it occurs low down, care must be taken, when operating, of the epigastric artery; but of this your anatomical knowledge will put you on your guard. The intestine generally protrudes either through the openings in the lineæ semilunares, or lineæ transversæ of the abdomen, which become enlarged. Sir Astley concluded by observing, that the diseases of the eye came next in order, and that Mr. Green would deliver the lectures on those affections.

To the Editor of the Lancet.

Sir,—Together with several students of our School of Anatomy*, I have been particularly interested in the case you have reported in *The Lancet*, of the man on whom Sir A. Cooper performed the operation of amputation at the hip joint.

It has been impressed upon us by our teacher, that there can be no proper case for amputating so high, and extracting the bone from the joint. He brings strong arguments before us to make good his assertion, and supports his doctrine with regard to several cases in which the operation is

* The School of Anatomy alluded to is not mentioned; but we infer it is that of St. Bartholomew's, and that the teacher whose opinion is quoted is Mr. Abernethy.—Ed

generally allowed to be performed, with sound reasoning and by the demonstration of many specimens of the diseases of bones.

Proofs and actual preparations are, however, weak in their influence upon some fellow-students, compared with what Sir A. Cooper's practice may effect upon their minds. This you are aware of; and let that circumstance be my excuse for requesting you to give us an account of the condition of the limb after the operation, and whether the femur was diseased higher than the place of the lesser trochanter. The importance of the question is great, and this is a very proper opportunity for discussing it. By your description of the dissection let our Professor have the advantage of another proof concerning this subject, and at the same time another proof of the liberality with which your *Lancet* is conducted.

I am your obedient servant,

INCISOR.

Feb. 3*d*, 1824.

We are perfectly aware that in the history of Jones's case, which we communicated to the public, there are two defects.—First; the slight account of the man's state previous to the operation, which was owing to the very short notice that was given of it, thereby preventing us from obtaining those particulars which we otherwise should have acquired.—Secondly; what is so properly complained of by our correspondent, viz.—the omission of the appearances of the removed limb. This arose from the bone not having been exhibited, a circumstance which we exceedingly regret. No operator should ever omit, in justice to those who are present, and to his own character as a surgeon, to exhibit the parts which are removed, in order that all may see the reasons for which the operation was performed.—In consequence of Sir Astley Cooper having omitted to do this, an impression exists, in the minds of some, that he was not justified in the course he adopted, of removing the limb from the joint. Had the appearances of the bone been shown to the students, the profession would then have had sufficient *data* for judging of the propriety or impropriety of the operation, and the present impression would most probably never have existed.

From the number of operations performed at the Borough hospitals, some persons think that the knife is occasionally resorted to in cases where it might be dispensed with. In answer to this, we would only state at present, that the size of these institutions should be borne in mind, and the celebrity which some of the surgeons belonging to these institutions have obtained for their skill in the use of the knife.

We must confess, however, that a great rage for operations exists at the Borough; the pupils are extremely anxious to see them performed, and the surgeons appear equally anxious to obtain a reputation by performing them. The surgeons and students of surgery, however, should remember that there is something else besides the mere *mode* of operating—that there is another important point connected with operative surgery —*the time* when operations should be performed. To be able to operate well, a man must possess some manual dexterity, and an acquaintance with anatomy; different operations requiring these qualities in a different degree. To know when operations ought to be performed, and when they ought not, requires more extensive attainments, and can only be learnt by those who investigate disease, and watch its effects with a degree of attention which few seem disposed to bestow. The principles of medicine must be thoroughly understood. An acquaintance with various remedies, diet and temperature, on various complaints, must also be possessed—knowledge which can only be attained by the most laborious study and diligent observation.—To remove a limb, or to come to see it removed, demands little exertion on the part either of the surgeon or student, compared with a patient examination into the nature of the disease for which the operation is to be performed, and of the chances of amelioration a patient may possess, from the trial of different means on the complaint under which he labours. There are some cases in which there cannot exist a doubt as to the propriety of operating; where, on the prompt skill of a surgeon, the life of a patient depends. We do not wish to discourage the performance of operations, when they are necessary; but we make these remarks on account of the misdirection which the minds of the students appear to receive from looking only at the *manner* in which the operator uses the knife, without ever inquiring into the *reasons* for which the operation is performed.

MIDDLESEX HOSPITAL.

Retraction of the Muscles of the Thigh after amputation, and irritability of the Stump.

William Rose, ætat. 18, of a scrofulous habit, dark hair, dark grey eyes, and saturnine complexion—the son of a respectable farmer in Oxfordshire, had been almost from his childhood afflicted with a disease of the knee joint, commonly termed a white swelling; for which, after undergoing a variety of unsuccessful treatment, amputation was proposed and performed, about eight years ago, by a surgeon at Oxford, a regularly educated practitioner, whose skill it

would be unfair to call in question, although the patient, at this distant period, loudly complains of the result of the operation. From his own account it appears, that no sufficient integuments were left to cover the end of the bone: but this we shall show by-and-bye is as likely to have resulted from a retraction of the muscles, frequently consecutive of amputations of the thigh. A good deal of exfoliation of the femur seems to have followed, till in process of time the bone became covered with skin, but with little else. After which the limb remained so acutely sensible as totally to incapacitate the patient from wearing a leg of any description, or even to suffer the tip of the finger to be applied to the stump. The least touch, however slight, being sufficient to excite the most excruciating sensation, with almost an electric effect. The causes and nature of this affection, with all the circumstances attending it, being so well described by Sir Astley Cooper, in his lectures, it is quite unnecessary for us to say a word more upon this part of the subject. In the present case, the skin was a good deal puckered and retracted, and appeared as if it had been stretched over the end of the bone, and as we have observed above, was highly irritable. The limb was also smaller in size compared with its fellow, than any other we have observed after such an operation. Under these circumstances, he came to the hospital, on Thursday, January the 29th, 1814, for the purpose of submitting to a second operation, which was fixed for the next day. In the evening he had

Calomel gr. iii.

Pulv. Rhei gr. viii. Ft. Pulvis.

Jan. 30. The operation was performed about one o'clock, but not without some difficulty, in consequence of the extreme irritability of the stump, and partly from the obstreperous conduct of the patient, which, however, may be readily excused. That fortitude which induced him to solicit an operation, and which supported him when placed on the table, forsook him in an instant, on the first touch of the knife. His motions, which were almost convulsive at this period, seriously endangered the fingers of the operator. The muscles of the thigh being drawn upwards by the assistants, an incision was commenced on the inside of the stump, about an inch and a quarter from its extremity, and carried underneath, in the direction of a line slightly curved, till it made an opposite point on the external part; a similar incision was instantly made on the anterior part, in the same direction; the retractor was then used, and afterwards the ganglion of nerves which caused the irritation was carefully cut through and separated; upon which, the bone was divided by the

saw. About four ounces of blood were lost during the operation; which appeared to be principally venous; one small artery, however, bled a little, but ceased before it could be secured. No tourniquet was employed; upon the supposition, we presume, of the femoral artery having either retracted or become obliterated above the incision; the artery was, however, compressed at the groin, during the operation. The parts were then brought together by adhesive straps, over which some simple dressing and lint were placed, and the whole secured in the ordinary way. He was then replaced in bed. A complete ganglion, or plexus of nerves, having almost the appearance of cartilage, was found closely adhering to the removed portion of bone. The os femoris was of an unusually small size, and scarcely exceeded a third of an inch in diameter: the linea aspera was, however, of about the usual size.

The evening after the operation, he had Tr. Opii m. xxx., et Mist. Camp. ℥ iss. Pulse 92, and full. About one o'clock, a. m., a considerable hæmorrhage ensued, and about a pint and a half of blood was lost; the dressings were removed, and a large artery lying near to the os femoris was secured; there was a slight bleeding, also, from a smaller vessel, which, however, stopped during the process of tying the former. The spasmodic twitching and acute sensibility of the stump still remained but little mitigated at the above period. It was then dressed as before.

31st.—Had a good deal of pain in the limb during the night. This morning he is rather irritable; pulse 96, and rather weak; tongue quite clean; skin rather moist; observed a very slight oozing of blood through the dressings during the night.

In the morning he had—

Conf. Aromat: ʒ ss.
Tr. Opii. m. xxv.
Aq. Menth. pip. ℥ ss.

which he vomited.

In the afternoon he was more composed and comfortable.—Pulse about the same, but rather fuller. In the evening, he had the opiate repeated. Has had an indifferent alvine evacuation to-day.

Feb. 1.—Pulse 100, and fuller. Tongue a little furred; no hæmorrhage from the stump; the opiate was again given at night, when he appeared more cheerful. Takes beef tea and rice-pudding, with a tolerable appetite.

2.—Pulse 110, tolerably full; skin rather hot and dry; bowels not open yesterday or to-day.—

R. Liq. Ammon. acet. ℥ ss.
Aq. puræ, ℥ iss., sextis horis sumend.

3.—Pulse about the same as yesterday. The stump was dressed to-day, when it was found that suppuration had commenced. No adhesion had taken place—the ligature was

found firmly attached to the artery—the irritation before alluded to in the stump was remarked to have in a great degree subsided. In the evening he had a dose of house medicine to evacuate the bowels, and at night the opiate was repeated.

4.—In the morning he had another dose of house medicine, in consequence of his bowels not being moved by the dose given him yesterday. To-day he has had several copious stools. Pulse about 100, and tolerably full. Tongue and skin natural—stump comfortable—and spirits good. The opiate was repeated at night.

From this period he had no bad symptoms, and soon afterwards left the hospital.

RESURRECTION MEN.

We have received some communications about the case of one of the individuals, who was lately sentenced to be transported for *seven years*, for stealing a body from a church-yard near Chelmsford. The man's name is Clarke; the crime of which he was found guilty is called felony. No individual who takes the least interest in the promotion of medical science can read this fact, and remain unconcerned at the consequences with which this and similar instances of the infliction of punishment on resurrection men are likely to be attended. Whilst the human mind is gradually freeing itself of prejudice, owing to the rapid diffusion of knowledge, it is most extraordinary that the one against the procuring of bodies should remain undiminished and unabated, even with those from whose station in society we should least have expected it. By this means the prejudice becomes more deeply rooted in the minds of the ignorant and uninformed, who are not able to think for themselves. The effect of this has been to throw almost insurmountable obstacles in the pursuit of that science which, of all others, has a greater tendency to increase the happiness and lessen the misery of mankind. To state that it is by dissection alone that anatomy can be acquired, would be a mere repetition of what must be a well-known fact to every tyro in medicine. But to those persons who are indifferent to the advancement of knowledge, and who feel no desire to assist others in its pursuit, unless they be convinced that it is for their own advantage, it may not be amiss to acquaint them, that they are in reality endangering their own happiness by the impediments they throw in the way of anatomical pursuits. Without anatomy, medicine and surgery cannot be acquired; and by these sciences, some of the greatest evils which afflict human life can alone be relieved.

We have already entered at length into the arguments connected with the subject; we

have stated the object of anatomical knowledge, the only means by which it can be acquired, and the difficulties experienced in obtaining subjects for dissection; we wish now to raise the members of the profession from the apparent apathy into which they have fallen, and to induce them to come forward and devise some means by which the present impediments may be removed from the pursuit of that science to which they devote themselves. The legislature should be entreated to interfere: some of the members, who rank high in the profession, should wait on the Secretary of State for the Home Department, and devise with him some plan that would effect the desired object, and which at the same time would not irritate the feelings of those who are naturally prejudiced against dissection. All that the legislature now does to forward this science—the study of anatomy,—is to give the bodies of criminals executed for murder to be dissected; this, we fear, has an opposite effect to the one which it wishes to forward,—it tends to keep up rather than remove the prejudice which is at present so strong against the obtaining of bodies for dissection. Mr. Abernethy has suggested, that those persons who die in London without friends, or being claimed, should be given to the anatomical schools. This suggestion we really think deserving of consideration, for though the number of bodies that would then be procured would not equal the demand, still it would tend to establish a custom which must lead to beneficial results. Perhaps it might not be judicious suddenly to repeal all the laws which exist against the resurrection men, yet they should be gradually lessened in their severity, and at last totally abrogated. We would also recommend to the different officers of the institutions of this metropolis to allow the bodies of all who die within their walls to be opened as a mere matter of course; and lastly, we would suggest that surgeons themselves, and other philanthropic individuals, who may be able to overcome the remonstrances of their friends, should give directions in their wills for their own bodies to be dissected; beginning thus at home, the example would have weight, and be followed by others.

We feel an interest in this subject, and as far as we have influence (which we have good reason to believe is not slight) we will do all that we can to forward any measure which may have for its object the removal of the prejudice which exists against dissection. Let the profession exert itself in the cause, and those exertions we will warmly second.

Ueber Diat-Entziehung, und Hungercur, von L. A. Struve. *On the Cure of inveterate Chronic Diseases, especially Syphilitic and Pseudo-Syphilitic, by means of*

Diet and Hunger.—By Doctor L. A. STRUVE, *Altona.*

[*From the Allgemeine Medizinische Annalen.*]

THE cure of diseases by abstinence and a rigorous attention to a dietetic regimen, was recommended by Celsus, who flouaished in the reign of Tiberius, rnd by Cœlius Aurelianus, a Greek medical writer of the fifth century. There is no positive evidence, however, of its having been systematically practised until the time of Frederic Hoffman, who published his Treatise on the efficacy of hunger in the cure of diseases, (Dissertatio de inediâ magnorum morborum remedio,) at Halle, in the year 1648. This method of cure was practised by Hoffman, with some success, but it seems to have soon fallen into disrepute or disuse, probably from the disinclination of patients to submit to so severe a discipline as it imposed, until it was revived about twenty years ago, at Copenhagen, by D. Winslow, a Swedish physician. It has since become very general throughout Sweden and Denmark, and has also, according to Dr. Struve, been practised with great success in Prussia, Saxony, and Austria. The diseases in which the *hunger-cure* is said to have been eminently successful, are cephalalgia, vertigo, tendency to apoplexy, dyspnœa, old ulcers, impetigo, malignant herpes, gout, leucorrhœa, scrofula, and syphilis. Dr. Struve distinguishes the treatment by means of abstinence into three degrees. First, where the patient is not limited to any precise quantity of food, but is merely restricted from all aliment of an irritating quality, or which is difficult of digestion, and from all heating drinks: this he calls the *simple dietetic treatment.*

The next degree is that in which the quantity of food is prescribed to the patient, and he is moreover advised to observe a certain forbearance with regard to this quantity, so that he may accustom himself to take somewhat less than his stomach requires: this, Dr. Struve calls *the treatment by subtraction and abstinence.*

The third stage is that in which not only the quantity and quality of food are prescribed, but the quantity is gradually reduced to the lowest possible point short of exposing the patient to the hazard of his life; this is the method properly termed *Hunger-cure, or cure by starvation.*

The object of this plan of treatment is, to effect a cure of disease by diminishing the quantity of nutritive matter received into the system. But what are the curative effects of this treatment, and how are they capable of restoring to an equilibrium the disturbed health of the patient? The first effect is the sensation of hunger, and as a necessary consequence the contraction of the stomach, and an increase of the mechanical force with which it acts upon the food

received into it, and prepares it for digestion. A less quantity of food being taken, it is more easily and completely elaborated by the stomach than it would be if taken in a sufficient or exuberant quantity; and the same thing happens with respect to the chyle, which being less in quantity but better prepared, is more easily absorbed by the lymphatic vessels, and especially by the lacteals of the intestinal tube. The blood, therefore, though diminished in quantity, is improved in quality. As in the living body there is a constant interchange between the matter deposited by the sanguiferous vessels and that taken up by the absorbents, a necessary consequence of the treatment by abstinence will be, that the diminished afflux of matter capable of being assimilated with the blood, by means of the absorbent vessels of the intestinal canal, must have an essential influence on this constant interchange. In this chiefly consists the efficacy of this mode of treatment, which would, however, if pushed too far, entirely break down the strength of the general organization, and lead to the destruction of life. Properly conducted, it cures diseases by altering the process of assimilation and reproduction, by means of a corresponding alteration in the interchange of animal matter.

Dr. Struve proceeds to state that it is not necessary for the patient to undergo any preparation for this plan of cure. All that is necessary is to pay great attention to the cleanliness of the skin during the cure, so that the perspiration may not be impeded. For this purpose the warm bath, and frequent ablution of the whole body with soap and water, will be useful. Dr. Struve, with a minuteness perhaps not unnecessary at Altona, recommends the patient to wash and comb himself, and, if possible, to change his shirt every day.

The following is the plan adopted in the hunger-cure. At six o'clock in the morning the patient is to take five pills made according to the following formula:

R. Extracti cicutæ ʒ ij.
Saponis medicat. ʒ ss.
Pulvis cicut. q. s. ut ft. massa et div. in pil. mediocres.

After which he is to drink half a pint of the decoction of the woods, or the compound decoction of sarsaparilla. At nine o'clock he is to take two ounces of white bread, and two ounces of cold roast veal, beef or mutton, without fat; at four o'clock in the afternoon he is to eat the same quantity of bread and meat; and at nine in the evening he is to take five more pills, and drink another half pint of the decoction. If the patient should prefer three repasts, he may take an ounce of bread and as much meat at nine in the morning and six in the after-

noon, and double that quantity at noon. He may allay his thirst with the decoction, of which he may take from a pint and a half to four pints a day. Dr. Struve sometimes allows his patients, at the commencement of the cure, to take double this quantity of bread and meat, but he reduces this allowance gradually, so as to bring it on the fifth day to two ounces of bread and two ounces of meat. If the patient should find this diet too dry, he may give a zest to it by the abovementioned decoction, or if he prefers it, by a glass of pure water. If he should experience an insupportable sense of hunger, with pain in the region of the stomach, and attempts to vomit, he should relax from the austerity of this regimen, by taking his first repast an hour earlier, a dish of barley-meal in milk or water at noon, and his supper between six and seven o'clock. If he dislike cold meat, bread alone should be given to him, but in doses of four ounces and a half instead of two. For some days after the commencement of this treatment he will generally suffer a tormenting sensation of hunger, but nothing should be done to assuage this, as it is essential to the success of the cure. If the uneasiness should be insupportable, he should endeavour to allay it by drinking the decoction, or, if he pleases, by smoking tobacco.

As an impression is made on the general system, the beneficial effects of this treatment on local affections soon become manifest. The patient indeed becomes thin; all his secretions are diminished; his fæces are hard and small, resembling grains of pepper; in general his bowels are not opened oftener than once in three or four days, and are sometimes confined as long as fourteen days*, in which case the evacuation is difficult, and accompanied with tenesmus. In some patients, after they have taken their pills and decoction in the morning, a gentle perspiration is observed, which, however, seldom appears after some weeks have elapsed. The circulation becomes slow, the muscular force diminished, so that the patient cannot support himself on his feet, and his respiration is slow and laborious; symptoms which indicate that the treatment is carried as far as is consistent with his safety. Besides these general phenomena, visible effects are produced on local affections. Ulcers under this treatment appear at first to get worse, because inflamed and painful; in a short time, however, their appearance improves, the callous edges fall down, healthy granulations

* We have inserted this article rather with a view of enabling our readers to judge of the state of medical science in the north of Europe, than from any respect we entertain for Dr. Struve's opinions, or his mode of treating chronic diseases.—Ed.

arise, and skin soon covers over the cavities. Eruptions dry up, and are thrown off the skin, swellings disappear, and sores of the nose and genitals heal kindly. When the symptoms of disease have completely disappeared, the treatment may be soon laid aside. The cure is generally effected in from four to six or eight weeks; seldom before the fourth week. In some malignant cases it requires two months; and where it has become necessary to intermit it, that the strength of the patient may not be too much reduced, a longer period will in general be required. A few days after the symptoms have disappeared, the patient may be gradually brought back to his usual mode of living, but he must avoid for a long time all food which is difficult of digestion. He should continue to drink the decoction for some weeks. During the cure all local remedies are superfluous. The ulcers are to be kept clean with warm water, and sometimes with the decoction of hemlock, and salt water; and eruptions should be covered with compresses steeped in warm water or decoction of hemlock.

In the treatment by *subtraction*, which is adapted to milder diseases, Dr. Struve allows the patient three or four times the quantity of food permitted in the cure by starvation, but in this case also the patient is specially enjoined never to fill his stomach. In the simple dietetic cure, which is the mildest form of treatment, the patient is allowed a sufficient quantity of nutriment, consisting of milk, bread, veal broth, &c., but he is restricted from meat, salt, wine, spirits, coffee, &c. The patient is, in all these modes of treatment, to avoid exposing himself to cold, and is recommended to stay in a room heated at a regular temperature of from 15° to 20° Reaumur*.

Amputation at the hip joint performed by Mr. Symes *of Edinburgh.*

From the Edinburgh Medical and Surgical Journal.

On the 2d of September, assisted by my much esteemed and highly respected friend and instructor, Mr. Liston, and in the presence of Dr. Abercrombie, Dr. Anderson of Leith, Dr. Scott, and Mr. Marshall, Surgeon to the Forces, I performed the operation in the manner following, on a man 20 years of age.

Having with some difficulty placed the patient upon a table, so that the affected limb was perfectly free, and ascertained that Mr. Liston was

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* Dr. Struve admits that he has not yet made a sufficient number of experiments, to enable him to pronounce whether he can rely entirely on the abstraction of nutriment without exhibiting his pills and decoction at the same time.

ready to make pressure when and where required, I introduced a narrow knife, about a foot long in the blade, which was sharp on one edge only, at the proper place for transfixing the limb: but, being prevented by the bent position in which, owing to long habit, the patient obstinately retained it, from passing onwards in the direction of the tuberosity of the ischium by the neck of the femur, I lost no time in the repetition of fruitless attempts, but instantly changed my plan.

Without removing the point of the knife, I brought down its edge obliquely, and by a sawing motion, quickly cut back, in a semicircular direction, to the tuberosity of the ischium, up along the femur, and round the trochanter major, so as to form very speedily identically the same flap which would have resulted from the plan I meant to have followed.

While Mr. Liston covered the numerous cut arteries with his left hand, and compressed the femoral in the groin by means of his right, I gathered together all the mass of undivided parts on the inner side of the thigh with my left hand, and then insulated the neck of the bone by passing the knife close past its lower surface. I now cut close down the bone for some way below the trochanter minor, and lastly made my way outwards obliquely, so as to form a good internal flap.

Mr. Liston holding aside the flaps, I made a single cut with my long knife upon the head of the bone, which started with a loud report from its socket as soon as abduction was performed. Finally, I passed the knife round the edge of the bone, cut the triangular and remaining portion of capsular ligament; and thus completed the operation, which certainly did not occupy, *at the most*, more than a minute.

I then proceeded, without delay, to take up the arteries, which were tied by Mr. Thomas Evans.

As soon as the femoral, which had been completely commanded by pressure in the groin, was secured, Mr. Liston relaxed his hands, in order that we might form some estimate as to the size and number of bleeding vessels; and then, had it not been for thorough seasoning in scenes of dreadful hæmorrhage, I certainly should have been startled, prepared as I was to expect unusual vascularity, owing to the extensive action so long carried on in the limb.

It seemed indeed, at first sight, as if the vessels which supplied so many large and crossing jets of arterial blood could never all be closed. It may be imagined that we did not spend much time in admiring this alarming spectacle. A single instant was sufficient to convince us, that the patient's safety required all our expedi-

tion; and, in the course of a few minutes, hæmorrhage was effectually restrained by the application of ten or twelve ligatures.

The flaps were now brought together and retained in contact by means of five or six stitches. Some dry caddis were laid over the wound; and, lastly, I applied a single-headed roller obliquely round the body and stump moderately tight, so as to afford proper support for the flaps: and then we lifted into bed the patient, who was wonderfully little exhausted.

About the 12th day, the ligatures began to separate, and by the third week, they were all withdrawn.

Though the wound always retained a healthy and healing appearance, the patient suffered much from occasional returns of irritability in the intestinal canal, marked by diarrhœa and vomiting, which it may be believed, tended greatly to protract recovery, and required assiduous medical attention; how much I am indebted to Dr. Abercrombie for his kind advice and assistance on these occasions, as well as benevolent attention to the poor lad in other respects, it is impossible for me to express, and can be properly understood by those only who have been placed in circumstances of equal responsibility.

About a month after the operation, the wound being nearly healed, I was flattering myself with the prospect of soon seeing Fraser restored to health and strength; when, to my great disappointment, symptoms of ascites made their appearance, and notwithstanding all our endeavours to the contrary, by means of gentle diuretics, such as supertartrate of potass and nitrous æther, which were all that his weak state could bear, continued to increase, and at last carried him off at the commencement of the eighth week from the operation.—No. 9, Vol. 2.

This statement, it appears, was transmitted to the editor by the operator himself, so that in every point of view it is a fair subject for comment. Our attention has been particularly called to this operation, in consequence of its having been alluded to by the northern journals, for the purpose of casting a shade upon the splendour of London surgery; and in doing this our brethren of the North, sarcastically compared the time occupied by Mr. Symes to that occupied by Sir A. Cooper, when he recently performed a similar operation at Guy's Hospital. As regards time, the difference is unquestionably very great, Sir *A. C.* having required *twenty* minutes to remove the limb, whereas Mr. *Symes*, according to his own account, was contented with ONE minute.—But is this contrast to be significantly pointed at, for the purpose of throwing scandal upon the operation of Sir *Astley?* Can it, we ask, with any propriety be so referred

to? Decidedly not—on the contrary, we consider that Mr. *Symes's* operation was performed, to say the least of it, most unskilfully.

Let us now look for a moment at the history of Mr. *Symes's* operation; after having described the direction in which the first incisions had been made, he thus continues:—

"Mr. *Liston* holding aside the flaps, I made a single cut with my long knife upon the head of the bone, which started with a loud report from its socket, as soon as abduction was performed; finally, I passed the knife round the edge of the bone, cut the triangular and remaining portion of capsular ligament; and thus completed the operation, which certainly did not occupy, *at the most*, more than a minute.

"I then proceeded, without delay, to take up the arteries, which were tied by Mr. *Thos. Evans.*

"As soon as the femoral artery, which had been completely commanded by pressure in the groin, was secured, Mr. *Liston* relaxed his hands in order that we might form some estimate as to the size and number of bleeding vessels; and then, had it not been for thorough seasoning in scenes of dreadful hemorrhage, I certainly should have been startled, prepared as I was to expect unusual vascularity, owing to the extensive action so long carried on in the limb.

"It seemed, indeed, at first sight, as if the vessels which supplied so many large and crossing jets of arterial blood could never all be secured. It may be imagined that we did not spend much time in admiring this alarming spectacle. A single instant was sufficient to convince us, that the patient's safety required all our expedition, and in the course of a few minutes, hæmorrhage was effectually restrained by the application of ten or twelve ligatures."

Such are the details of this curious performance, and if we had permitted them to remain in our pages unexposed and uncondemned, *The Lancet* would no longer have been a fit instrument for the hands of Medical Practitioners; nor would it have discharged its duty as a Monitor, for the instruction of medical students, as we do not recollect in modern times any operation which has presented to the Tyro in Surgery an example of more injurious tendency than this; for it seems to inculcate the pernicious principal that manual dexterity is the most important desideratum in the performance of surgical operations.

That Mr. *Symes's* amputation was expertly performed all must readily admit; but that it was executed with judgment, will be as universally denied. Not a vessel was secured until after the head of the bone had been removed from the acetabulum—no; not even the femoral artery; yet, at the conclusion, we find

that twelve ligatures were applied; so that eleven vessels were bleeding at the time the twelfth was being tied; ten while the operators were securing the eleventh, and so on to the last. When we reflect upon this mode of proceeding, and consider the immense quantity of blood that must have been lost, we feel greatly surprised that the patient did not die while on the operation table. Mr. Symes acknowledges that he should have been startled if he had not been accustomed to scenes of dreadful hæmorrhage, at the quantities of arterial blood which issued from the vessels when Mr. Liston relaxed his hands; and likewise remarks, that a single instant was sufficient to convince him that his patient's safety required all his expedition. We sincerely hope Mr. Symes will never again expose a patient to similar risk, or himself to a repetition of such dreadful anxiety. Mr. Liston, it appears, grappled with, and squeezed the arteries for the purpose of checking the alarming flow of blood. This circumstance is so truly ludicrous and anti-surgical, that we are almost inclined to believe that the assistant operator was Mr. Liston, the comedian.

Case of Ligature of the Carotid Artery, on account of Hæmorrhage from the inferior Maxillary Artery. By E. W. Duffin, M.D., Fellow of the Royal College of Surgeons, Edinburgh.

On the 11th instant, early in the forenoon, I was requested to visit Lilias French, a delicate child nearly four years of age, who was reported to have been bleeding profusely from the mouth, from about one o'clock in the morning, in consequence, it was supposed of the rupture of a vessel, occasioned by an attack of vomiting that had supervened during the night.

I found her lying on her left side, insensible, and completely blanched, from loss of blood. The breathing was anxious and hurried, the extremities were cold, the pulse extremely quick, when felt in any of the larger arteries, but imperceptible at the wrist or ancle. An extremely fetid odour, like that of a sloughing part, was exhaled from the fauces; the mouth was half open, and filled with a coagulum of blood which protruded between the teeth, and florid blood, though in no great quantity, trickled over the left and depending angle of the mouth. A soft, doughy, colourless tumour occupied the whole extent of the right side of the inferior maxilla, extended along the base of this bone, and under the tongue. Upon separating the teeth to examine the nature of this tumour, a portion of clotted blood, situated over the molar teeth, suddenly gave

way, and instantly a quantity of arterial blood gushed from the part, appearing to come from between the gums and alveolar process. The coagulum was immediately replaced, and pressure applied to the bleeding point by means of the finger of a by-stander, until some more permanent method of restraining the hæmorrhage could be had recourse to, which, on its first attack, had apparently been prevented from proving fatal only by the supervention of syncope.

A basin, containing about an English quart (*i. e.*, a chopin) of blood, was presented to me, which I was informed had been collected upon the accession of the bleeding; and I was assured that more than half as much again had been lost before I saw the patient.

Conceiving, from the present exhausted state of the child, and the ungovernable nature of the hæmorrhage, that the only means of affording even a chance of recovery, consisted in tying the main trunk of the bleeding vessels, the necessary instruments were immediately procured, and returning with my friend, Mr. Symes, to whose kind assistance I owe many acknowledgments, I immediately proceeded with his aid, and that of his pupil, Mr. Evans, to pass a ligature round the lower third of the common carotid artery, in the usual mode of performing that operation; and from this period the hæmorrhage ceased.

In about twenty minutes afterwards the pulse returned in the wrist, the extremities acquired a considerable degree of heat, and the breathing improved.

As the child was unable to swallow, a glyster of arrow-root mucilage, with a little spirits, as the readiest stimulant that could be procured, was administered, and with apparently good effect, as the sensibility greatly increased, and the powers of deglutition returned in rather better than an hour. Beef-tea and wine were then given in small quantities at intervals, by means of an injection-bag, and every symptom augured favourably until about eight o'clock, P. M., when the pulse rapidly sunk again, slight convulsions attacked the face, and the girl died.

Upon inquiry, it appeared that this patient had suffered excruciating agony in the situation of the disease for a period of more than three weeks; but as this was considered to arise from tooth-ach or gum-boil, no advice was taken.

Dissection. — An incision being made through the integuments from the angle of the jaw to that of the mouth, and another bisecting this, which was continued in a straight line along the side of the neck to the point at which the artery was tied, the skin and cellular texture were dissected back, so as to expose the tumour in

its whole length, which appeared of a purple colour, extended from the ramus of the inferior maxilla to the symphysis menti, and passed under the tongue, external to the glossal muscles, but internal to the digastric, including the jaw-bone in its centre.

The inferior maxillary gland was much diseased, softened in texture, and of a brown hue. Upon cutting into the tumour, it was found to contain about three ounces of grumous blood, the sac being formed by the periosteum, which was separated from the bone in its whole length internally, and externally from the capsular ligament of the articulation to the symphysis of the chin, and at the base of the bone to a little beyond this point. Upon sawing through the bone a little to the left of the symphysis, and removing the right half of the jaw, it was found that the inferior maxillary artery was of very considerable size, diseased in its whole extent, of a dirty brown colour, easily lacerable, and so loosely attached to its osseous canal, that it was withdrawn from it entire, in the same way as a clot of blood may frequently be taken from a vein after death. It appeared ulcerated immediately at the point where it gave off the first branch to the teeth, and there existed at the corresponding portion of the bone a carious aperture, through which the blood had issued and insinuated itself as described. The last molaris was carious, and the other teeth of the same side were loose in their sockets. The body of jaw, as might be expected, was discoloured and dead, and the gums were in a sphacelated condition.

In all probability this case might have had a more favourable issue, could the nature of the disease have been ascertained at an earlier period; but unfortunately it was incurable before advice was sought for.

LECTURE XXXII.

On the Diseases of the Eye. By Mr. Green.

Gentlemen. — In speaking this evening of the diseases of the eye, I cannot but observe that there seems no good reason why the treatment of these diseases should be excluded from the general practice of surgery, for the treatment of these, as of all other diseases, depends on the same principles of cure, and when diseases of the eye occupy exclusively the attention of persons calling themselves oculists, they are very apt to be treated in an empirical manner. It is desirable, therefore, that surgeons of good general education should direct their attention to this subject. It has been said, indeed, that they have hitherto paid too little attention to this part of their

professional duties, but I think this reproach is fast wearing away. In the consideration of this subject I shall first speak of simple inflammation of the tunica conjunctiva; then of its modifications, its consequences, and treatment. I shall next speak of simple inflammation of the deeper seated tunics, those of the globe of the eye; the consequences of such inflammation, and the treatment which it may be proper to adopt.—Thirdly, I shall describe the diseases of the lens, and particularly that disease of the crystalline lens which terminates in cataract: and the operation which it is necessary to perform for that disease. Lastly, I shall speak of the diseases of the appendages of the eye, their treatment, and the operations required for their cure. In this evening's Lecture I shall confine myself to

Inflammation of the Tunica Conjunctiva.

And first,—*Of Simple Inflammation of the Conjunctiva.*

This, however, may be divided, like other inflammations, into acute and chronic. The symptoms of inflammation of the conjunctiva do not differ from those of inflammation of other parts of the body, except in so far as they are modified by the structure of the part, and by the function of the organ. Indeed the change which takes place in inflammation of the conjunctiva may be regarded as a very beautiful instance and illustration of the change which takes place by the process of inflammation in general. I have only to premise, before speaking of the symptoms, that the inflammation may exist in various degrees, from the slightest degree of excitement up to inflammation of the most violent and intense character.

The first symptom is redness of the part: which is very remarkable, because the blood naturally conveyed by the vessels to this part is colourless. Under any existing irritation, the vessels are distinctly observable, and become injected by red blood. When the irritation continues, the vessels become still more apparent, and at length all the interlacements and anastomoses of the vessels of the conjunctiva partake of the inflammation, and present almost one uniform appearance of redness. During this time more or less pain is experienced: at first, as the vessels become filled, an uneasy sensation is felt; this increases, and at length,

upon the admission of light, a sharp lancinating pain is experienced; the patient is under the necessity of keeping the eye closed, and, indeed, has some difficulty in raising it, not only from the pain he suffers, but from the degree of fulness and swelling with which it is accompanied. This pain goes on increasing, and at length the patient complains of a burning heat, and a sensation as if some extraneous body were lodged in the conjunctiva: a sort of grating between the conjunctiva and the lid. At this time the admission of the least light or air produces such lancinating pain, that the eye is spasmodically closed. During the first part of the inflammation there is a more abundant secretion of tears, and this generally increases until there is a constant flow of water from under the lids.

It sometimes happens that, at the highest stage of excitement, this increased secretion is suddenly diminished, and there is a preternatural dryness of the eyes, producing painful sensations. A considerable degree of swelling takes place; the conjunctiva becomes turgid from the increased quantity of blood admitted by the vessels, and effusion follows. Although the swelling is pretty equally diffused over the whole surface of the conjunctiva, it seems to be the greatest at the transparent cornea, because here the coat is more tightly adherent. The conjunctiva is here elevated in a circular fold, and this appearance is called chemosis. The eyelids are in general more or less swollen from the same cause; namely, the greater determination of blood to the part, and the filling of the vessels. Not only is pain experienced in the eye from the causes I have mentioned, but also a sense of weight and fulness in the globe of the eye, as if the ball were too large for the socket. The neighbouring parts also, the forehead and temples, partake of the pain; there will be a shooting pain to the maxillary bone, or more deeply seated in the head; these pains are in some instances extremely violent. This train of symptoms is attended with a greater or less degree of constitutional irritation. The patient complains of great lassitude, prostration of strength, chilliness or rigor followed by heats. His skin will often be hot and dry, and his pulse quick and hard; his stomach will be affected, and nausea or vomiting produced; he will

often complain of pain in the back, and in short of all the symptoms which indicate a considerable fever of the sympathetic kind, arising from local irritation. The degree in which these symptoms occur will of course vary according to the constitution of the patient. In young and robust persons there will often be a high degree of local inflammation, without much constitutional irritation; while on the other hand, in delicate and irritable patients, a much less, nay sometimes a very trifling degree of local inflammation, will be accompanied with violent symptoms of constitutional derangement. Accordingly, although *cæteris paribus* the degree of constitutional irritation will be proportional to the degree of local excitement, this principle will be so much modified by the particular constitution of the patient, that in cases where, from the violence of the inflammation, much constitutional derangement might be expected, very little will occur; and *vice versâ*, where, from the slight degree of local excitement, very little might be expected, it will sometimes happen that a great degree of constitutional irritation will attend it. So much for the symptoms of ophthalmia, as existing in simple inflammation of the conjunctiva, without any particular modification. It will not be necessary to point out particularly the predisposing causes of this complaint, because they do not differ from the predisposing causes of inflammation in any other part of the body. I shall only mention, therefore, some of the causes which most frequently produce irritation in the eye, and lead to inflammation of the conjunctiva. Any extraneous body lodging in the conjunctiva will produce this effect; and this is so frequently the cause of inflammation, that it will be right in all cases carefully to examine its surface, in order to ascertain whether there is any extraneous body in it, such as a particle of dust or sand, a piece of grit or lime, or any of the scoriæ which often fly off from iron while it is beaten on the forge. Any extraneous body of this kind will readily produce irritation, and inflammation of the conjunctiva. Variation of temperature, especially when accompanied with any sudden access of light, will produce this inflammation. Thus it has often happened that persons who have gone out of a warm room to look at fire-works have been attacked with it. The change of tem-

perature, together with the brilliant light to which the eye is exposed, seem to produce it. Persons sitting in a hot room, or a theatre where there is much light, and exposed at the same time to a draft of cold air, have often had inflammation of the conjunctiva. So particular states of the atmosphere will become in some degree excitants of this inflammation, and it has been observed to be more frequent during the prevalence of easterly winds. There seems to be some ground for this opinion. Other causes of this inflammation may exist, but it is not necessary to enumerate them more at large. The principal causes are, the admission of any extraneous body and variations of temperature, especially if accompanied by intense heat and light, or partial exposure to drafts of cold air. I have said that this inflammation is either acute or chronic; let us consider in what the chronic stage of it consists. The term *chronic* is not, as its etymology would lead you to suppose, applied merely with reference to duration of time; it is not only applied to signify that state of congestion and debility of vascular action produced by the acute stage, but it is also applied to that state of inflammation which from the commencement has a character of atony and debility. As this is the most frequent form in which you will find this inflammation, whether primary or following the acute stage, it is necessary to attend particularly to the symptoms by which it is distinguished, as the mode of treatment is very different from that which is required in acute inflammation. The symptoms of chronic differ from those of acute inflammation of the conjunctiva rather in degree than in kind; so that after they have existed for some time in the acute stage, you find the disease gradually passing into the chronic stage. The redness will be less intense, the pain which accompanied it less acute, the intolerance of light will be less, the chemosis and swelling will be diminished, the effusion of tears less considerable, the constitutional irritation will in a great degree have subsided, and, in short, all the acute symptoms will be much mitigated. There will still, however, remain a considerable degree of irritability in the eye, on exposure to light; some artificial defence to exclude the light will be necessary, and the person will still be incapable of applying the organ to the ordi-

nary purposes of vision. The cause of chronic inflammation, both exciting and predisposing, are very similar to those of acute inflammation, and indeed I have already said that one form very commonly passes into the other; but at the same time it is to be remembered that there are many causes which tend to produce this inflammation, accompanied with atony and debility in the very outset, which distinguish it from acute ophthalmia. Chronic inflammation of the conjunctiva is very apt to take place, where the patient has for a long time been labouring under disorder of the digestive organs. Patients who have this form of the inflammation often complain of dyspeptic symptoms; such as uneasiness about the scrobiculus cordis, distention of the stomach after eating, flatulence, disagreeable tastes in the mouth, bitter, sour, or putrid, furred tongue, and other symptoms indicating derangement of the digestive organs. Inflammation of this kind is very apt to arise from, or to be kept up by, exposure to acrid fumes or smoke in particular trades. It is not unfrequently the concomitant of dentition, the measles, or small-pox; it sometimesaccompanies rheumatism and gout. Frequent intoxication and various other causes may predispose to it, which it will be necessary to investigate carefully, because the mode of treatment will materially depend upon them, as I shall have occasion to show you in another part of the lecture.

In general, inflammation of the conjunctiva is a very manageable complaint. It passes into chronic inflammation after the acute stage has continued for a certain time, and it not unfrequently subsides of itself. A spontaneous cure, however, is by no means to be depended upon, and we ought on no account to neglect or relax in the proper mode of treatment from any reliance upon such a cure; because simple inflammation of this membrane may lead to inflammation of the deeper-seated tunics of the globe of the eye, suppuration may be induced, the organ may at length become permanently disorganized, and the sight of the eye irretrievably lost. The consequences of inflammation of this membrane are very similar to those of inflammation in other parts of the body. It sometimes terminates in effusion, the serum or blood under the conjunctiva rising in a roll above the transparent cornea. It sometimes

produces the adhesive process; and when it terminates in this manner the adhesive matter is deposited under the conjunctiva, which covers the transparent cornea, and is recognised by a hazy appearance at the part. The adhesion is various, both in its extent and quantity; it is sometimes so slight as only to produce a simple clouded appearance over a certain part of the cornea, which is technically called nebula; it is at other times more considerable in quantity, and produces an appearance of considerable opacity in the cornea, which is usually called albugo, or leucoma. The deposit of matter is sometimes confined to a simple speck, and is sometimes spread more or less over the whole surface of the cornea, so as to interrupt or intercept vision altogether. The inflammation sometimes proceeds to the suppurative process; indeed the tunica conjunctiva appears to be of a nature very analogous to the mucous membranes of the body, and, like these, is exceedingly prone to the suppurative stage of inflammation. The suppuration generally proceeds from the surface of the conjunctiva, as from the surface of any mucous membrane in a state of inflammation. In other instances, the formation of pus is circumscribed; a deposit of lymph takes place where the conjunctiva covers the cornea, or in its immediate vicinity, and a little abscess or pustule arises from the centre. Ulceration is also sometimes produced: this usually occurs in the cornea, in consequence of laying open this pustule, probably from the denudation or exposure of the cornea. Lastly, sloughing and mortification of the cornea is not an uncommon effect of a high degree of suppurative inflammation. The same consequences, therefore, occasionally arise from inflammation of the conjunctiva as from inflammation in other parts of the body; namely, effusion, adhesion, suppuration, ulceration, and mortification. As the most serious consequences, therefore, often follow from simple inflammation of this membrane, let us consider the mode of treatment which we ought, under such circumstances, to pursue.

Of the Treatment of Simple Inflammation of the Conjunctiva.

It will be necessary to adopt at once, with vigour, the antiphlogistic plan of treatment. As the best mode of diminishing the action of the heart and

arteries, the use of the lancet should be freely resorted to, in the commencement of inflammation of the conjunctiva. You ought not to be satisfied with taking away a certain quantity of blood; as, for instance, 8, 10, or 16 ounces: but you should in this, as in all other cases of acute inflammation, accompanied with hardness of the pulse, make a free orifice in a large vein, and take away a quantity of blood, until some manifest effect is produced upon the action of the heart and arteries; keep your finger on the pulse of the patient, in order to ascertain how the heart is affected, and carry on the bleeding even to faintness. This may prevent the necessity of again having recourse to the lancet; or, if it should be necessary to do so, blood may be taken away in much smaller quantities. You will, of course, be guided by the state of the patient's pulse, as the only certain criterion; and when this is diminished, leeches may be afterwards conveniently applied.

The application of leeches, in the first instance, except in very large numbers, is seldom sufficient in acute inflammation; three or four leeches will scarcely produce any effect upon it. Opening the temporal artery is another mode of bleeding, which is attended with very good effects in this inflammation. This practice has been decried by some persons, who suppose that by opening the temporal artery you force the blood to pass through the anastomosing branches, and in this way throw more blood into those vessels which are immediately distributed to the eye. Whether this be the case or not I am not prepared to determine, but I have certainly seen good effects from opening the temporal artery in this inflammation, and I am therefore often inclined to adopt this practice. Some practitioners recommend the practice of dividing the vessels of the part by scarifying the conjunctiva. This is a practice, however, which I do not recommend: the quantity of blood taken in this way is small; the irritation produced in performing the operation is considerable, and the clots of blood left after it often excite or keep up inflammation of the conjunctiva. Great benefit is derived from treatment directed more especially to the body at large; such for instance as diaphoretic medicines. The tartrite of antimony is a very useful medicien

of this kind; perhaps there is no medicine which, after bloodletting, tends so effectually to keep down the action of the heart and arteries. It should be given in such doses, and repeated at such intervals, as to keep up a state of nausea. Purgative medicines are thought by some persons to be not at all necessary in this inflammation. Richter, a very valuable writer on surgery, is of this opinion; and I am quite surprised at it, for much benefit will undoubtedly arise from evacuating the bowels of any accumulation of feculent matter. Constitutional irritation will be materially abated by keeping up the secretions from the intestines, and in many cases, by altering and rendering them more healthy. The bowels should therefore be freely acted upon by doses of calomel, combined with jalap, scammony, or cathartic extract; and the effects of these medicines should be kept up by the exhibition of neutral salts, so as to produce a considerable number of watery stools. At the same time, the diet of the patient should be low, and he should be kept in a state of perfect rest and quietude. When an impression has been made in this way on the symptoms, it will then be proper to adopt other plans of treatment; for instance, where blood has been taken to a considerable extent, the application of a blister to the nape of the neck will be attended with beneficial effects. The treatment of the part is also to be considered; the head should be kept raised, so as to favour a return of the blood from the eyes, and the access of air or light should also be prevented by keeping the room darkened. When I say that the access of air should be prevented, I do not mean that the room should not be kept well ventilated, for this is a very material point, but only that the patient should not be exposed to variations of temperature. With respect to local applications, I believe it will in general be found that moist warmth is most agreeable to the patient in acute inflammation of the conjunctiva. This may be applied in the way of fomentations, either by means of tepid water, or decoctions of marsh-mallows, poppy-heads, or camomile flowers. Where there is much irritability, steam will often be found useful, and especially the steam of water in which opium has been infused, from which the patient will experience great relief. Some persons recommend a sort of

poultice, although from the tumefaction of the lids, this is an application which cannot be very conveniently used. The poultice, of course, is not of the ordinary description; it is generally made of camomile flowers, boiled so as to be rendered extremely soft, and put into a gauze or muslin bag, which should be applied so as to make a very slight degree of pressure on the eye. If poultices are employed, they should be very frequently changed, for otherwise they are very apt to confine the secretions, and rather to keep up than diminish irritation. Fomentations, however, such as I before described, are greatly preferable. Many persons prefer cold to warm applications; if cold applications are employed, care must be taken that they do not stimulate the part. The choice of cold or warm applications should depend entirely on the feelings of the patient; if he do not find relief from warm, you should then try the effect of cold applications. I have found, however, that in general moist warmth has a tendency to produce relaxation of the vessels, and to favour the passing of the acute into the chronic stage of inflammation. Warm applications, however, must not be continued when the chronic stage has commenced, for they would then do mischief instead of good. On this account, you should observe attentively the change of the inflammation from the acute to the chronic stage, that you may alter your plan of treatment as soon as the latter stage has commenced. In the chronic stage the evacuating plan may to a considerable extent be laid aside; the diet, though still not stimulating, may be more generous; there will be no necessity for continuing the diaphoretic medicines, as the skin will generally be sufficiently moist, nor will it be necessary to evacuate the bowels so freely, though attention should be paid to their due action; alterative medicines will often be found beneficial. The local applications should be of an entirely different character; they ought to be moderately astringent and stimulating, as your object now is to excite some degree of action in the vessels, and to get rid of their relaxation and atony, care being taken at the same time not to stimulate the parts too much. Various collyria or eye-waters are used for this purpose; all of them moderately astringent or stimulating; such as the solution

of alum in water, solutions of the sulphate of zinc, or the sulphate of copper, or the liquor plumbi subacetatis. These solutions should at first be very much diluted; ten drops of the liquor plumbi subacetatis may be added to four or six ounces of water; a grain of alum, or half a grain of the sulphate of zinc or copper, may be dissolved in an ounce of water. The solution should be gradually strengthened in proportion to its action on the part, and the degree of stimulus which may be required. To judge how far the stimulus may be carried, the criterion is exceedingly simple; if you find that a certain degree of smarting and pain is produced, which soon subsides, and leaves the patient much more easy than before, you may be convinced that the collyrium is beneficial; if, on the other hand, the patient experiences a great degree of pain, which does not subside speedily, and the vessels become turgid, you may be assured that the collyrium is doing harm, and that the quantity of stimulus ought to be diminished. The best mode of applying an eye-wash of this kind is to inject it by means of a silver or ivory syringe, introduced under the lids every two or three hours. In this way you may be certain that the solution is diffused over the whole surface of the conjunctiva. An eye-cup will answer the purpose very well, if the patient, after immersing his eye in the cup, has the courage to open it. The syringe, however, is a more manageable instrument. Mr. Ware recommended, in chronic ophthalmia, what in the old pharmacopœias used to be called tinctura thebaica. The vinum opii will answer the same purpose, and seems to be one of the best stimuli which can be employed in chronic ophthalmia; it acts as a mild astringent, and at the same time, by its soothing quality, sheaths the effect of the stimulus, so that no pain is produced. It may be right, in speaking of collyria, to say that I have found patients able to bear them stronger when the chill is taken off from them; the warmth of the application seems to take away the pain, while the effect remains the same. The vinum opii may be employed in the quantity of one drop, or even of two or three drops, two, three, or four times a day. It will be best to drop it into the inner canthus of the eye, with a camel-hair pencil; the patient should

then shut his eye, and move it about, so that the fluid may be diffused over the whole surface. I have seen this application used two or three times a day, and in the case of children, sometimes only once a day, with the most decided benefit. There is another circumstance which should be attended to in the treatment of chronic ophthalmia, namely, not to exclude the light so much as in acute ophthalmia. If the patient can bear a moderate degree of light, it should be freely admitted. He should wear no bandages, and have no other protection than a shade. Continued darkness and heat are very apt to keep up a morbid state of sensibility and irritability in the eyes. Lastly, with respect to the treatment of chronic ophthalmia, I have already stated various causes which predispose to, in some instances excite, and in many keep up, this state of the complaint.—You must give, therefore, conjointly with those remedies which I have just pointed out, others to act on the morbid state of the constitution, which keeps up the local irritation, and your success in the treatment of this inflammation will very materially depend on the accuracy with which you investigate the causes to which I have adverted, and the judgment with which you apply the remedies.

I shall now proceed to consider the suppurative form of inflammation, producing,

Purulent Ophthalmia.

Suppurative inflammation of the conjunctiva is the most severe form of inflammation in that membrane. It is exceedingly acute, very rapid in its progress, and often very destructive in its ultimate effects. This form of the complaint requires very active treatment. —The symptoms are so manifest that there can be no doubt of the nature of the complaint, its prominent character being the formation of a considerable quantity of purulent matter. In other respects the symptoms are not very different from those which characterize inflammation generally. The patient at first feels an uneasy sensation about the eyes; next some degree of pain on the admission of light, which increases to a considerable intolerance of light. Redness of the vessels is observed, and besides this a greater degree of swelling than commonly attends simple inflammation. The eyelids soon become much swollen, the conjunctiva, where it covers the

fore part of the globe of the eye, is tumid; there is considerable chemosis, and often such turgescence of the upper lid as to prevent the patient from raising it. The lids are often so much tumefied as to become everted, so that a sort of roll of the lid is formed. These are the symptoms which precede the discharge of matter. A fluid first appears, which is not opaque, and has the character of tenacious mucus; in the course of twenty-four hours it assumes the appearance of pus. It is thick, yellow, sometimes green, and poured out in considerable quantity. The appearance of the tunica conjunctiva has been not inaptly compared to the fœtal stomach, when injected. It has the appearance of a villous membrane highly injected with red blood, and certainly very nearly resembles the internal surface of the fœtal stomach when highlyinjected. If you examine it with a glass, you will see drops of pus oozing on the surface, and collecting there in considerable quantities. The acute stage of purulent ophthalmia is of very short duration; it has a tendency to pass rapidly into the atonic stage, in which there is action without power, and congestion of the vessels of the part. At this time the violence of the acute symptoms is mitigated, but the patient labours under considerable prostration of strength.

Purulent ophthalmia has a great tendency also to terminate in sloughing. The cause of this tendency it is perhaps not very easy completely to explain: Mr. Travers thinks that it is produced by a constriction of the small vessels distributed to the part of the cornea, in the same way as sloughing of the glans is produced in paraphymosis by the cutting off of such vessels. Sometimes the sloughing commences in a small portion, and gradually lamella after lamella is destroyed, until the aperture assumes a funnel-like shape; at other times a slough forms in a considerable portion of the cornea at once, and opens into the anterior chamber. The commencement of the sloughing process may be recognised by a haziness of the cornea, which soon amounts to considerable opacity. When you observe a dark appearance beyond the ulcerating parts running from the deposit of lymph so as to form a surface from which the chasm is to be filled up, you may regard this as a favourable sign that the sloughing has here found its limit.

The case is not to be regarded as hopeless when sloughing of the cornea has commenced, for if the opening be only small, the common effect is, that the aqueous humour will escape; the iris will become prolapsed into the aperture of the cornea, but the patient may afterwards recover, and though the shape of the pupil will be altered, he may still retain a considerable degree of vision. When the opening is large, the iris will not only be prolapsed, but protruded; not only the aqueous, but the crystalline, and the vitreous humours will escape, and the sight of the patient will be irretrievably lost. The causes of purulent ophthalmia are various; it is often occasioned by the violent degree of inflammation produced by some highly irritating substance, such as caustic lime. It occurs occasionally in newborn children; in this case it is doubtful whether it arises from the first exposure of the eye to the light, or, as is commonly supposed, from the application of the vaginal secretions to the eyes of the child on its passage into the world. It generally takes place in the first week or month after the birth of the child, and seldom later than three months.

Another, and one of the most violent forms of purulent ophthalmia, is that which is called gonorrhœal, from its being produced by the application of gonorrhœal matter to the conjunctiva. This of all others produces the most intense degree of inflammation. It may be readily traced to the cause I have just stated, in consequence of the person labouring under gonorrhœa inadvertently using a towel, or any thing to which the gonorrhœal matter has been applied, and thus conveying it to the part. I am aware that this inflammation has been stated, upon what may be considered good authority, to be a metastasis of the gonorrhœal symptoms from the urethra to the conjunctiva. I have never, however, seen a case in which I could entertain the least suspicion that the complaint was produced in that way, and I do not think that there is sufficient evidence to establish such an opinion.—There is another form of ophthalmia, which has been called the epidemic, or Egyptian; epidemic, in consequence of its attacking a number of persons at the same time in particular districts: and Egyptian, because it resembles that form of ophthalmia with which our troops

were attacked in Egypt in the year 1801. This disease was, however, well known in this and other countries long before our soldiers went to Egypt, and it has taken place in districts where there could be no possibility of communication with those soldiers. There can be no doubt that it arises spontaneously, and often attacks epidemically a number of persons in the same district. How it arises it is difficult to say; it was supposed to be produced in Egypt by the combined effects of heat and dust; but it is doubtful whether it may not rather arise from some particular state of the atmosphere with which we are not perfectly acquainted. I have only in conclusion to speak of the

Treatment of Purulent Ophthalmia.

If the lancet is to be used in any kind of ophthalmia, it is more especially to be used, not only boldly, but very early in this. It may be said indeed, that unless some decided impression is made on the symptoms in the first twenty-four hours, we shall be unable afterwards to check the progress of the disease. It will be necessary, therefore, to push blood-letting to a very considerable extent, in an early stage of this inflammation. Topical bleeding, by the application of leeches, is quite out of the question in this complaint, except in the case of children.—Blood should be taken in large quantities from the arm of the patient. The army surgeons, who have had the most extensive opportunities of witnessing this form of the disease, all concur in the utility of copious bleeding. All the other antiphlogistic remedies, which I before enumerated to you, are to be put in practice in this case. Purgatives should be administered so as to produce a considerable quantity of watery stools; diaphoretic medicines, and especially the tartrate of antimony, in doses of ¼ or ½ a grain, should be given at such intervals as to keep the patient in a state of nausea, and topical applications should be employed very much in the same manner as in simple inflammation. During the first stage of the complaint, moist warmth in the form of fomentations and poultices, such as I have already described, will be found beneficial. The acute stage, however, is of very short duration, and they are not to be continued beyond that period. The extent to which the antiphlo-

gistic plan should be pushed, must vary according to the violence of the complaint, and the constitution of the patient. Young, robust, and plethoric patients will bear depletion to almost any extent; on the other hand, you must proceed with more caution where the patient is of a weakly, debilitated, or irritable habit of body. You must not, however, be deterred from adopting an active plan of treatment until you have produced a manifest effect on the system of the patient: until the pulse becomes soft, the skin moist; the pain, swelling, tension, and throbbing of the eyes, considerably abated, the chemosis diminished, and in fact all the acute symptoms more or less subdued. When this is the case, if you should be called to the complaint in an early stage of it, the subsequent treatment will in general be very easy. It often happens, however, that we are not called to this complaint until it has arrived at the chronic stage, when the conjunctiva is feebly pouring out pus, the pulse depressed, the skin cold and clammy, the countenance sallow, and when the constitution has materially suffered from the progress of the disease.—In this state, an entirely different plan of treatment will be required. Gently stimulating applications should be employed by means of a syringe, so as to cleanse the conjunctiva, and free it from the pus which has collected on its surface, and at the same time stimulate the relaxed vessels. In general it will be necessary to employ tonic remedies, such as bark, for instance, always attending to the due action of the bowels, without which tonics would be useless, and even injurious to the patient. To children bark may be given in the form of extract, to the extent of from two to five grains, two or three times a day. The eyes should not be bandaged, nor should the matter be allowed to collect; cleanliness is of great importance in the treatment of this form of the disease. With respect to the treatment of the sloughing cornea, some nicety will be required. When you have ascertained that the sloughing process is commencing from the hazy or opaque appearance of the cornea, the antiphlogistic must be changed for a gently stimulating and tonic plan of treatment. Weak astringent collyria should be used to favour the throwing off of the sloughs. Observe the process of the sloughing from time to time;

If there is a firm layer beneath, the patient is going on well, but if the sloughing has a flocculent, soft, ash-coloured appearance, in addition to mild stimulants to the part, you should employ tonic remedies, such as bark. In the treatment of purulent ophthalmia, it is of great consequence to pay strict attention to the changes which take place in the symptoms, so that neither the depleting nor the tonic plan may be blindly continued. The treatment should be regulated by the violence of the symptoms, and by the changes which take place as the disease passes from the acute to the chronic form. The errors in the treatment of this complaint may be comprised in two words; they consist either in continuing the depleting plan too long, or in not resorting to it sufficiently early. If the antiphlogistic plan be not adopted at a very early stage of the disease, the tonic treatment will afterwards be of no service; and on the other hand, if you continue the depleting plan too long, you will check the restorative process, and the beneficial effects which nature would otherwise assist in producing.

LECTURE XXXIII.

Strumous Ophthalmia.

Strumous, or scrofulous ophthalmia, is so called, because it is met with in those persons who are of a scrofulous diathesis—it occurs in children, and not unfrequently in adults. The inflammation is of the atonic character, that is, if I may be allowed to use a solecism, it is chronic from the commencement, it is one of atony from the beginning; and the reason why it is necessary to speak particularly of this complaint is, because there is one symptom invariably present—intolerance of light. The patient cannot bear the least access of light; there is great difficulty of opening the lids, the orbicularis palpebrarum appears spasmodically contracted, and so difficult is it for a patient to open the eyes, that he can seldom do it; an adult may have sufficient resolution, but it is necessary that the eyes should be opened. The only way by which this can be done, is by fixing the head of the patient, when it is a child, between your knees, with the fore-finger of the one hand to raise the upper lid, and that of the other to depress the lower, which will

give you an opportunity of seeing the eye; but in doing this, great caution will be required to prevent eversion of the under lid, or any undue violence to the part. When you examine the conjunctiva, you will be surprised to find how little it is inflamed, though the child does not raise its head from the mother's lap. I say that it will be necessary to examine the eye frequently during this state. Disorganization of the different parts of this organ often take place; the cornea, or rather conjunctiva covering it, becomes covered with an opaque capsule, with vessels shooting over the cornea, so as to give it an herpetic appearance; that is, there will be seen over the cornea yellow spots, which are deposits of lymph. These open into small ulcers, which are streaked with vessels carrying red blood. The eye becomes very painful, and extremely irritable, and there is often, in this state, intense redness of the conjunctiva. Under these circumstances, similar ulcers form in different parts of the cornea. The formation of these ulcers produces all the symptoms of acute inflammation of the eye, and the organ not unfrequently becomes slowly and gradually disorganized. So long, however, as the cornea continues bright, and of its natural colour, there will be no danger to be apprehended from the formation of ulcers. But it is of the greatest importance that the cornea should be narrowly watched, as, if the inflammation continues for a long time, ulcers are very apt to form on it. But the most distressing symptom, and the one about which the patient expresses the greatest uneasiness, is the intolerance of light.

Treatment of Strumous Ophthalmia.

I have said that the inflammation is one of the atonic kind, yet there exists considerable irritation. Depletion must be had recourse to, but not to any considerable extent: it will be right to apply leeches, but certainly blood-letting should not be pushed too far, and throughout the whole treatment, it will be necessary to keep in view the nature of the constitution which is generally met with in scrofulous subjects; it is languid and debilitated; the digestive organs are deranged; there is loss of appetite—tongue white and furred; bowels torpid; secretions defective in quantity and in quality—skin dry and hot; in fact there is a good deal of

fever present. The mild depleting plan must be first adopted, regulated as far as the constitution will bear it: you must remove the symptoms of irritation; open the bowels freely by calomel purges, repeated more or less frequently as they improve the secretions. Alterative mercurial medicines should then be given, and if necessary they should be combined with rhubarb and magnesia, but not so as to produce watery stools.

When the fever becomes diminished, the bowels perform their natural functions, the tongue looks clean, and the skin assumes its healthy feel, you may begin with tonic remedies. Aromatic bitters, combined with alkalies, will be found useful remedies. But at the same time you must amend the state of the constitution by attention to regimen and diet. The food should be light and nutritious, clothing warm. Exercise should likewise be taken; not to such an extent as to produce febrile excitements, but to invigorate the health. Sea-bathing will be of advantage; and when the constitution is not in that state to bear the cold-bath, the warm should be used; and if the patient is in a situation where sea-bathing cannot be resorted to, he should sponge himself with tepid water, gradually accustoming himself to the use of cold; by this means the general health will be much improved. As for the treatment of the part affected, it will be right to employ depletion at the onset, as far as the application of leeches. It will be proper also to apply blisters behind the ears, or to the nape of the neck; and blisters in this complaint are no ordinary remedy. You will be surprised to find, after the application of a blister, how soon the intolerance of light will vanish, even in children; their disposition will rapidly alter, and the inflammation be so slight, that you can actually open their eyes without any trouble. Warm and moist applications are beneficial; the steam of water containing opium allowed to go on the eyes will be good. About a drachm of opium dissolved in a pint of hot water, and the steam of it directed over the eye, will relieve to a considerable degree the irritation. But if any of these applications be used at the onset, they must not be long continued before recourse is had to mild astringent collyria. Their strength must be regulated by the feelings of the patient; not so strong as

to irritate, but to be followed by relief to the part affected. The *Vinum* opii is a remedy particularly adapted to this complaint at an advanced stage: it tends considerably to lessen the irritability of the part, and to increase the strength of the relaxed vessels. At the onset, however, a more active plan of treatment must be adopted: relief must be sought by the application of leeches and blisters, more especially by the last. It will be necessary sometimes to give mercury so as slightly to affect the mouth, remembering the state of the constitution in scrofulous persons, and taking great care that it is not pushed so far as to affect the general health.

Another form of inflammation of the eyes, nearly allied to the one I have just been describing, because it is in general a consequence of it, is

Psorophthalmy.

Psorophthalmy is an inflammation particularly of that part of the conjunctiva which lines the lids, but it extends sometimes over the whole of the conjunctiva covering the globe. This complaint is often obstinate, and extremely difficult of cure: it extends over the cornea, conjunctival lining of the palpebræ, the cheek and nose; and lastly, the globe of the eye becomes affected, if this complaint be not checked. At the origin of this disease, there is a glutinous matter secreted on the edge of the lids; ulcers form; and there is often great difficulty in separating the lids from one another. By this means matter lodges on the lids, and tends to keep up the irritation of the whole of the part. You not unfrequently see the redness extending down the whole of the cheek, and excoriation taking place on the cuticle. If the inflammation spreads over the whole of the conjunctiva, the lachrymal sac becomes irritated, and effusion of tears over the cheek takes place on the surface of the cheek. The inflammation is of the atonic kind, accompanied with that symptom distinguishing strumous ophthalmia, intolerance of light, and a feel as if there were some extraneous body in the eye, grit or sand, which gives rise to an effusion of tears. The lids are very red on the edges, and there is an incrustation of matter on them. There is occasionally a contraction of the integument of the lower lid, by which it becomes depressed and everted. In this inflammation the secre-

tion deposited from the lids dries up, ulcers form, small briny incrustations are formed, and there is an appearance of tinea on the lids. The watery part of the secretion from the lids is evaporated, which leaves the incrustations that keep up the irritation, and form small ulcers. In consequence, an alteration in the figure of the tarsi occurs; there is a contraction of the cellular membrane just beneath the lower palpebra, and eversion of that lid. This affection of the eye is of difficult management, and is frequently found in persons of a scrofulous diathesis, in children of large towns, who are ill fed and worse clothed, with little attention paid to cleanliness. The complaint is very obstinate in its cure; and if relieved, it generally returns, and becomes as bad as ever. It is not, however, confined to the lower classes, but the higher and middling ranks of society are sometimes attacked with it; those who are of a scrofulous diathesis. In schools also it will be found; it frequently arises from the irritating matter being applied to the lid, which may be conveyed from one to another by using the same towel, or in some such way. The treatment of this complaint does not essentially differ from that of the strumous; it is an inflammation without power, one of the atonic kind. Depletion must not be pursued to any extent. It will be right when any symptoms of irritation are present to remove them by the application of leeches, and opening the bowels. Drastic purgatives must not be exhibited, as they do not answer the object which it is intended to effect: mild aperients, combined with mercurial medicines, such as calomel, the hydrargyrus cum creta, or the blue pill, and in quantities so as to give tone to the system. When any febrile excitement that may have existed is removed, begin with tonic remedies; that is, when the skin has its natural feel, and the tongue is clean, and the secretions from the bowels are regular in their quantity and quality. The applications to the part should consist of mild stimulants, and the best form in which they can be exhibited is in that of ointment. The briny incrustations on the edges of the lid, and which are secreted from the meibomian follicles, confine the lids so closely together, that in the morning when the patient awakes they have the appearance of being

glued together. This leads to produce increased irritation on the edges of the palpebræ. To prevent this the lids are to be besmeared with some ointment. The one commonly used is that called the citrine ointment, the unguentum hydrargyri nitratis; but it cannot be well borne of the usual strength, and therefore is diluted with one-third, or one-half, or perhaps more than this, of unguentum cetacei, and this is applied with a camel-hair brush twice a day, the incrustations of matter being carefully washed off before its application, and then some of the ointment is to be besmeared along the edges. The unguentum hydrargyri nitrico-oxydi is used for the same purpose. In fact, any of the milder stimulating mercurial ointments will do. The application will be required to be varied, and the degree of strength must be regulated by the effect on the eye. The use of the vinum opii will be attended with beneficial results, and the application of blisters will have an universally good effect. In the use of blisters, however, in this complaint, as well as in strumous ophthalmia, no advantages will be derived from keeping them open; for when this is done, they are apt to give rise to fresh irritation. Therefore, after the application of a blister, you should desire it to be healed; and, if necessary, direct a fresh one to be applied. By this means the irritation in the eyes will be relieved, and their employment be attended with advantage.

The consequences of inflammation of the eye requiring distinct notice, and which are accompanied with equal or less inflammation of the conjunctiva, and kept up or excited by attendant circumstances, are now to be spoken of. In the first place, we shall treat of

Nebula.

This complaint is so called from the nebulous or cloudy appearance of the transparent part of the eye, which is produced by deposits of lymph into the conjunctiva covering the cornea. The membrane or layer stretched over the cornea will vary according to the more or less relaxed state of the vessels of the conjunctiva, which will be seen carrying red blood to the part. The veins corresponding to the nebulous parts will become turgid and prominent. If there be considerable inflammation, it must be removed by active means; and in these cases it will be proper

to deplete. The inflammation, however, is generally of the chronic kind, and arises from a relaxed state of the vessels, which require stimulating applications, in order that they may recover their tone, and convey the blood uninterruptedly. If the vessels be stimulated, the blood will be likely to flow through the veins; the absorbents will be excited, and remove the effused lymph. By stimulating applications, the cornea will frequently be restored to the same state of transparency as before the attack. Care must be taken that in the treatment no undue degree of stimulus be employed; if there should be inflammation it will be increased, and the complaint be as bad or worse than ever. A collyrium that may be used, is one with the sulphate of zinc, containing about a grain to an ounce of water, gradually increasing it in strength. One which has been recommended, is that with the corrosive sublimate, with a grain to an ounce of water. Calomel, or levigated sugar, has been used in many cases with good effects. This is quite an old woman's remedy, and has been recommended very indiscriminately. Unscientific persons—those who are not acquainted with the nature of the disease in which it is useful—seeing it do good in one complaint, think it will in all others of a similar appearance, though essentially different in their character, and therefore employ it in cases where it does harm, using it alike in a cicatrix from ulceration as in nebula arising from a deposit of lymph. In the one, if it be employed, loss of substance will be the result—inflammation will be excited, and fresh ulcers will form. In the other, that is, in nebula, it will often be of service, care being taken not to produce an over degree of stimulus in the part.

Pustules.

Pustules are generally seated at the junction of the transparent with the opaque cornea; but they may sometimes occur in the cornea itself, or the conjunctiva covering it, or the ball. They are seated in different parts. The appearances that they present at first are red or yellowish spots arising from a deposit of lymph in those parts, and are slightly elevated. There is considerable turgescence of the vessels around them. If they occur on the cornea, it will be nebulous and opaque; the vessels round the cornea will be seen distended, carrying red blood,

and having a radiated disposition. If the lymph be not removed by absorption, the pustules break, matter escapes, and ulcers form in their place. Sometimes there is only one of these ulcers, frequently two, one on each side of the cornea, just at the junction of the transparent with the opaque cornea, and occasionally the cornea is even encircled by them. Although the inflammation accompanying the formation of pustules is not acute, yet it frequently happens that there will be more or less pain on moving the eye, intolerance of light, and effusion of tears. These ulcers are difficult to manage, as they often occur in scrofulous habits of body and broken-up constitutions, and are apt to become chronic, and consequently difficult of cure. When the healing of the ulcers takes place, and the same state of body continues, they are soon reproduced, and the disease is greatly aggravated. As for the treatment this affection requires, it will be hardly necessary to say, that if considerable inflammation exists, depletion must be employed. The inflammation, however, is of the atonic kind.—First apply leeches, not in too large numbers, so as not to carry depletion to too great an extent: it will be proper to evacuate the bowels, not by drastic purges, but mild aperients, and to attend to the secretions. Blisters will be useful, if the sight be affected. When the state of the bowels has been regulated, you must begin with tonic remedies, and as early as possible with mild astringent collyria, and the best is the vinum opii. The only point to guard against is, that depletion be not pursued to too great an extent at the outset. The system must be invigorated by tonic remedies, and tone given to the vessels of the part.

The next affection to which I shall direct your attention, is the result of purulent ophthalmia, which is that called

Fungus of the Conjunctiva.

This appearance of the conjunctiva occurs in diseased subjects. The conjunctiva becomes loose and red, the vessels turgid with blood, and there is a fold of this membrane on the inside of the lids, which produces considerable irregularity on its surface—a morbid secretion is kept up on the part—and not unfrequently eversion of the lids is the result. Extraneous bodies often enter the eye, and disturb it considerably. To prevent this, and

remedy the complaint, the loose portion of the conjunctiva should be removed, which is a very easy operation. An assistant holding the lid, you, by means of a pair of forceps, raise the fold of the conjunctiva, and with a pair of curved scissors remove it. As to the after treatment, you must keep down inflammation, should it appear, by the means already recommended.

There is another affection more frequently met with than this, viz.,

Granulations of the Conjunctiva.

These are nothing more than loose irregularities of this membrane where it lines the lids. These projections continue to pour out a morbid secretion, which stimulates and irritates the whole eye; the palpebral conjunctiva becomes altered in its texture, and its surface is covered with a fleshy elevation, having the exact appearance of granulations. These granulations covering the surface of the conjunctiva lining the lids are constantly rubbed over the globe of the eye whenever it moves, producing pain and irritation, and keeping up morbid secretion, and, in fact, giving rise to chronic ophthalmia. Thus easy access is afforded to extraneous bodies, nebulous opacities form on the cornea, vessels will be seen shooting over it, and these will be quite in a varicose state, enlarged, and having a knotty appearance. The granulations, if not removed or remedied, produce ultimate blindness. Considerable advantage is said to be derived from the following plan of treatment: — remove the granulating surface of the conjunctiva by the lancet, or by a pair of curved scissors. I am not able myself to say that I have seen any great good result from this mode of treatment. Touching the granulations with nitrate of silver or sulphate of copper will tend materially to keep them down. One remedy in this complaint was first mentioned to me by my friend, Mr. TYRRELL, who stated that he had tried it with advantage: the liquor plumbi subacetatis applied to the surface of the granulations. The result of my experience has been to confirm this statement. If the vessels on the cornea be numerous, it will be proper to divide the trunks which supply them. This is a very simple operation. You must raise the lid and press on the globe, by which means you distend it and project it forwards; you then carry a sharp curved instru-

ment round the outside of the cornea, and divide the vessels, so that they shall not reunite. A bar of lymph is thrown out, which turns the vessels from off their course, excepting, perhaps, the small ones, which often reunite. It will be necessary, perhaps, to repeat it. Cases of this complaint are difficult to cure. These are remedies then to be used: removing the granulations, applying caustic applications, and the division of the varicose and enlarged vessels. These may be aided by setons, issues, and blisters, and attention to the general health.

Encanthis.

This consists in an alteration of the structure of the caruncula lachrymalis, and neighbouring semilunar fold of the conjunctiva. The caruncula is enlarged; at the commencement it has a granulated appearance, which it loses as it increases, and then becomes similar to a hazel nut, being ash-coloured, and streaked with varicose vessels. This enlargement or excrescence prevents the lids from closing, and allows extraneous matter to enter, which keeps up inflammation of the eye, and it also presses on the puncta-lachrymalia, and turns them out of their place; the tears, thus prevented from getting into the lachrymal sac, are effused on the cheek. The best treatment is to remove it altogether. It is a simple operation, and is performed, an assistant raising the lid, by taking up the tumour with a pair of forceps, and removing it with a pair of curved scissors with convex edges. When this complaint has not assumed the malignant form, it is always remediable by excision. Never operate, however, when the encanthis has become of the malignant kind, and put on the cancerous appearance. This will be known by the dull red colour of the excrescence, its excessive hardness, lancinating pains extending to the eye-ball and forehead, particularly when touched, foul ulcers, with irregular edges, having all the appearance of cancer in any other part of the body.

The last affection of which I shall speak is

Pterygium.

This is always of the triangular shape, and may be divided into the membranous and fleshy. The first has the appearance of a thin film of minute vessels converging towards the cornea. The usual seat of this affection is towards

the inner canthus, that is, with the base at the canthus and the apex against the cornea. It is always of a triangular shape, and the vessels proceed from the base to the apex. The fact is, that pterygia do not long exist before they produce a nebulous state of the transparent part of the eye by deposits of lymph, and then of fluid. The conjunctiva and sclerotic coat become loaded with vessels, and if this affection is not remedied, vision becomes impaired, and is ultimately lost. The fleshy pterygia differ from the membranous, and are more vascular. They first appear of a yellowish colour. Then the vessels running through them become large, and they have a red appearance; but always retain their triangular shape. When the disease has proceeded far on the transparent part of the eye, the only plan to adopt will be the removal of a part of the pterygium. This consists simply in raising the membrane as near as you can to the cornea, and cutting it through whilst suspended. When the pterygia are fleshy, more care must be taken in dividing them; they must be divided near to the margin of the cornea, and turned back from the apex towards the base.

There are a few other affections of the conjunctiva, but not of sufficient importance for me to detain you any longer this evening.

PHRENOLOGICAL SOCIETY.

Pallet

After some introductory observations on Phrenology, by Dr. Willis, on Saturday, Feb. 7th, 1824, Dr. Elliotson called the attention of the society to the phrenological developement of the head of Pallet, who murdered Mr. Mumford, in Essex, in December, 1823. This murder, he observed, though it made much less noise, was scarcely less atrocious in its circumstances than that committed by Thurtell. The head was quite as interesting as that of Thurtell, and quite as confirmatory of the truth of Phrenology. The first and most obvious circumstance to be observed on examining this head was, the enormous size of the animal or brutal portion of it, as compared with the intellectual: the part situated posteriorly to the ear being much larger than the anterior portion; the converse of which was observed in well-constructed heads. The general state of the organs was as follows:—

No. 1. Amativeness, large.
2. Philoprogenitiveness, large.
3. Inhabitiveness, not peculiar.
4. Adhesiveness, large.
5. Combativeness, moderate. In Thurtell's head this organ was very large.
6. Destructiveness, very large.

7. Constructiveness, large; in Thurtell's head very small.
8. Acquisitiveness, enormously large: in Thurtell's not large.
9. Secretiveness, very large.
10. Self-esteem, very large.
11. Love of approbation, very large.
12. Cautiousness, full.
13. Benevolence, very small. This organ was very large in Thurtell.
14. Veneration, full.
15. Hope, but moderate.
16. Ideality, small. In most murderers this organ was found to be very small.
17. Conscientiousness, very small.
18. Firmness, full.
19. Individuality, large.
20. Form, very large.
21, 22. Size, Weight, and Momenta, doubtful.
23. Colour, large.
24. Locality, full.
25. Order, full.
26. Time, moderate
27. Number, full.
28. Tune, moderate.
29. Language, small.
30, 31. Comparison, Causality, very small.
32. Wit, moderate.
33. Imitation, full.
34. Sense of the Supernatural, moderate.

The following dimensions were carefully taken, and compared by Dr. Elliotson, Dr. Willis, and Mr. Donkin:

Length of the Head from N. 19 to 2. Individuality to Philoprogenitiveness	7
In Thurtell's, which was however a larger Head	8¼
From 6 to 6. Destructiveness to Destructiveness	6¼
In Thurtell's	6¼
9 to 9. Secretiveness to Secretiveness	6 1/16
In Thurtell's	6 3/16
12 to 12. Cautiousness to Cautiousness	5¼
In Thurtell's	6¼
From the Meatus Auditorius on one side, measured over the head, to the Meatus Auditorius on the other	13¼
In Thurtell's	15
19 to 13. Individuality to Benevolence	5¼
19 to 14. Individuality to Veneration	5
19 to 18. Individuality to Firmness	6¼
19 to 10. Individuality to Self-esteem	8¼
19 to 2. Individuality to Philoprogenitiveness	7¼
27 to 27. Number to Number	4¼
7 to 7. Constructiveness to Constructiveness	5¼
In Thurtell's	5¼
28 to 28. Tune to Tune	4¼
The Circumference of the head over Individuality, Secretiveness, and Philoprogenitiveness	22
In Thurtell's	23

From this statement, said Dr. Elliotson, it appeared that there were six organs, namely, amativeness, destructiveness, acquisitiveness, secretiveness, self-esteem, and love of approbation, very fully developed in this man, all which proved his character to be any thing but intellectual. Not only, however, were the sensual organs very fully developed, but those of a higher character, namely, ideality, which had

been called exquisiteness by some phrenologists, as it was attended with a passion for every thing most exquisite and refined, conscientiousness, and benevolence were all exceedingly small, so that no poor wretch could be furnished with a more unfortunate combination of organs. It had been erroneously supposed by many that up to the moment of Pallet's committing this crime, his character was unimpeachable. The contrary, however, had been very satisfactorily proved; his previous conduct had been so profligate as to be the subject of general animadversion in the neighbourhood; his mother had tried in vain to check his career of guilt, and had frequently expressed her apprehensions as to his probable fate. His ignorance exceeded belief; he was utterly illiterate, and though he frequented the parish church, he was unable to repeat the Lord's prayer. There could not be a stronger proof of his want of intellect than his exclamation, "What a sad thing it is to be born to be hanged!" This was further corroborated by his conduct after committing the murder. On hearing a horse gallop towards the spot, he lifted the corpse on his shoulders, and went towards home, crying, "Here is Jem Mumford."

Dr. Willis observed, that this circumstance was satisfactorily accounted for, by his having secretiveness without causality.

His endeavours to conceal the murder, continued Dr. Elliotson, coincided with his secretiveness. He persisted in denying that he had committed the murder, from Monday till Friday, when he exclaimed in despair, that it was all over with him, and confessed his crime. Revenge was no doubt the cause of the crime, the deceased having caused Pallet to be taken before a magistrate, and fined for drunkenness, and having been the cause, as was supposed, of Pallet's discharge from the farm in which he was a labourer. These facts perfectly coincided with the full developement of the organs of self-esteem and love of approbation, which would cause him to feel very acutely every personal affront which was offered to him. His destructiveness was fully established by the circumstances which had been detailed in the papers. His brutal threats to hack Mumford's weasand, (that is, to cut his throat, &c.) proved the savage and murderous disposition of the man. It was true that he had been drinking before he committed the murder; but he was not intoxicated, for he was proved to be perfectly sober when he was first seen carrying the body on his shoulders. The large developement of No. 6, proved the cruelty of his disposition, and indeed nothing could be more barbarous than the manner in which this murder was committed.

Mr. Mumford had return-

ed from town in the coach: Pallet saw him, and set off while the coach was stopping. He cut a very thick stick; waited for Mr. Mumford on his way homewards, went behind him, and struck him a violent blow on the back of the head. This did not knock him down, but Pallet repeated his blows with such brutal violence, that Mr. Mumford's head was absolutely smashed to pieces. It was proved on the trial that every bone in the head, except the *os frontis*, was broken; and that one-thousandth part of the fractures inflicted would have been sufficient to cause death.—The ferocity of Pallet was further shown when he was taken by the officers, on which occasion he overturned the table, broke the glasses, and committed other acts of violence. He never shewed any courage; the murder was committed in the dark, and in the most cowardly manner; and he despaired from the first moment of his apprehension, exclaiming, "I shall be hung; Lord, have mercy upon me!" These facts coincided with the small developement of the organs of courage and hope. No. 17 (Conscientiousness) was small; accordingly he appeared to have no sense of religion; his only dread was that of being dissected, and he expressed a strong wish to be buried in the same burial ground with his father. Although, in committing this crime, he appeared to be prompted entirely by revenge, and to have no idea of robbing Mr. Mumford, yet he had no sooner effected his purpose, than he proceeded to rifle the pockets of his victim, and took from him a knife, his hat, great coat and other articles. This remarkable fact was explained by the enormous size of his organ of acquisitiveness. The learned Physician concluded by observing, that the cast on the table had been accurately taken from the head of Pallet, which had been sent to town from Colchester shortly after his execution.

To the Editor of the Lancet.

Sir,—Being unaccustomed to see your publication, *The Lancet*, it was not until this day, through the kindness of a friend, that No. IV. of Vol. II. came into my hands; upon the perusal of which I was much astonished at the manner in which my name is introduced, under the article "Dissection." It was there stated that a "surgeon of this metropolis, named Pettigrew, had a verdict of 700*l.* awarded against him for having mistaken a dislocation of the shoulder for a mere sprain. Of that verdict (it is added) we do not complain. It was perfectly right to visit such gross ignorance with severe punishment." The above paragraph is replete with error. The facts of the case (which occurred to my *father*, when engaged in practice in the city,) are as

follow:—A drunken man, with an equally drunken companion, were passing over Blackfriars-bridge in a gig—it was upset, and they were thrown out, by which the shoulder of one of them became luxated. The man was conveyed to his lodgings in Shoe-lane, Fleet-street, and my father was sent for. An indisposition, added to his great age, and infirmities, rendered him unable to get up in the middle of the night and attend to the case. His assistant therefore went, and with the aid of a fellow pupil, who had seen a good deal of practice, and had regularly pursued his studies, reduced the dislocation, the patient declaring, at the time, the head of the bone was returned into its socket, "*that it was in—that he felt it go in.*" The man was accordingly left. Improperly, the arm was permitted to be unconfined to the body: but a roller was applied round the arm and the joint, with the view of securing the bone. The next day the patient stated himself to be quite easy, and all was supposed to be going on quite well. In the course of two or three weeks the arm upon examination, appeared to be in an unreduced state, and although attempts were subsequently made to restore the bone to its proper situation they were unattended with any beneficial effects.

It is almost unnecessary for me to point out, that had the case been fairly stated in court, or those witnesses called that had been summoned, the verdict of the jury must necessarily have been very different from that which was given: or, that the parties were too happy to compound the damages rather than risk another trial; or, that it was extremely probable that the man had after the reduction of the dislocation, again thrown the bone from its situation; an accident, which every one acquainted with the anatomy of the shoulder joint, knows is not unfrequently the case; but it is proper that the readers of your paragraph, relating to this case, should know that the verdict was given against my father, to show that a master is answerable for any neglect on the part of his servants.

From this brief statement of the case, I trust it will appear that there did not exist any "gross ignorance," as you are pleased to express; and I trust that you will be anxious, as there is not any one of my name now practising surgery in this metropolis besides the individual who now addresses you, to insert this in your next number.

Were the perusal of your publication confined to my professional brethren, to most of whom the case is already well known, I should not have trespassed upon your attention; but as I find it is read by a large portion of the "reading public," it will, I presume, be but an act of

justice to me to insert this letter.

I am, Sir,
Your obedient servant,
T. J. PETTIGREW.

Spring Gardens, Feb. 11, 1824.

We are at all times most ready to insert any communication in contradiction or explanation of any circumstances which may be stated in *The Lancet;* and we have great pleasure, on the present occasion, in inserting Mr. Pettigrew's letter, because we feel that the identity of names may have led to some erroneous impressions. At the same time we must observe that Mr. Pettigrew has failed in making out his assertion that the paragraph was replete with error. The case is upon record; it furnished a fair illustration of our argument, and it is clear, from the unprecedented amount of the damages awarded, that the Jury believed it to be a case of gross ignorance. It is perfectly natural that Mr. Pettigrew should perceive many mitigating circumstances which did not occur to the Jury. Thus he carefully introduces the drunkenness of the patient, and even of his companion, not perceiving that, if the patient were drunk, the less reliance ought to have been placed on what Mr. P. seems to think a material declaration 'that he felt the bone go into the socket.' The statement does more credit to Mr. Pettigrew's piety than to his logic. While we deny, however, that the paragraph was either unfair or inaccurate, we can assure Mr. P. that in point of delicacy, we should have abstained mentioning the name of the defendant in the case to which we adverted, if we had known he had a son in the profession.

SKETCHES OF THE SURGICAL PROFESSION IN IRELAND.

NO. I.—MR. COLLES.

To the Editor of THE LANCET

SIR—To the labours of Spurzheim we are partly indebted for a new and fashionable art, which promises to divide the laurel with the more ancient ones of painting, statuary, and engraving. By the reduction of the German's theory to practice, the verbal draughtsman has been armed with many resources to give effect to his designs. He no longer appears in the limited capacity of a historical recorder of the mere treasures and qualities of the mind; his pencil takes a wider range, and in its lawless excursions brings home to the canvass, with unerring fidelity, the corporeal as well as intellectual beauties and deformities of human nature. A portrait of a Scottish philosopher by the facetious Peter Morris, or a sketch of an Irish barrister in the "New Monthly," requires only the addition of framing and gilding to rival the exertions of a Lawrence in the accuracy of characteristic delineation. Nay more, these

ingenious productions of the pen possess many advantages over those of the pencil; for we are not only made acquainted with every peculiarity in the expressions of the countenance, but the mind itself is reduced to a palpable form, and its causes explained, in those graphic efforts of description. Does not this compound species of composition, in which an attempt is made to explain mental phenomena upon mechanical principles, as by tracing depth of judgment to an expanse and elevation of forehead—richness of fancy to an arch spanning the frontal region—measuring, in short, a man's genius by applying the tape to his head,—does not all this, taken along with the pleasure which such performances afford to the public, look like an acquiescence in the doctrine of thought being the consequence of organization? We are far from thinking lightly of this beautiful acquisition to modern discoveries, which seems to be founded upon the common consent of mankind; for who is there who has not observed the similitude that exists between the inward and the outward man? Or who has not beheld, with silent veneration, the grandeur of those architectural proportions which usually enshrine the majesty of intellectual greatness, and predicted from the lustre of the eye the intensity of that internal fire of which the former is only a feeble emanation? Those exterior marks, however, of superiority upon the "human face divine," which challenge our admiration, we look upon at most as the effects or concomitants, and not the causes of genius, as presumed in the speculations of phrenology. But have we been all this time describing the art of description, or attempting to "break a lance" with phrenologists? No, surely not; for we are just about to admit that an examination of the mental and personal characteristics of the subject of the present sketch, if it do not increase, it cannot diminish, the probability of their specious hypothesis. Any person, who has contemplated for a moment the contour of Mr. Colles's head, could not but make a pretty correct guess at the contents. Plain and commonplace, no eminences break the surface of this almost hairless globe, as smooth and as even as any turnip that Mr. Cobbett ever reared to mature rotundity. Precisely of the same description is the spirit (shall we say?) that resides within. One would be induced to suppose that the cause which reduced the exterior to a tame uniformity of circumference had formed the interior to correspond. To use an agricultural phrase, Nature seems to have laid down this gentleman's head more in the *broadcast* than in the *drill style* of cultivation. It may be for this reason that the crops which it produces are less lux-

uriant, and of a more average description, than if the soil had been raised into fertilizing mounds and elevations.

The jargon, however, of metaphor apart,—you will please to recollect, that when we had the honour of addressing you last, we supposed that you were seated beside us on one of the benches of the great theatre of anatomy at the Royal College of Surgeons in Ireland, surrounded by one of the largest classes that has been at this institution since the peace, in all perhaps about two hundred; a hundred-and-fifty of whom have dissected, or intend to dissect, this season. We also told you that they were very noisy and ill-behaved. More than three parts of them are apprenticed to surgeons; and being neglected by their masters, and suffered to do as they please by the college, many of them must, of course, be guiltless of any knowledge of their profession! The conduct of youths thus left to themselves, without any restraint to check their levity, cannot be expected to be decorous or attentive. Their mere appearance is our present concern; and as they sit in the living panorama before us, they do not much accord with the notions which might be formed of a body of medical students. The same number of young men, taken from the various counting-houses or haberdashers' shops through town, would present as much of the elements of genius, as much of the deep traces of thought, and as much of every thing else which gives a studious character to the countenance, as this blue-frocked, black-stocked Wellington-booted assemblage of medical dandies. Gold rings, broad and bright, glitter here and there among the artful labours of the frisseur, as the hand supports the head, thrown into the attitude of mental abstraction; steel guard-chains, often without watches to protect, sparkle almost in every breast, and quizzing-glasses hang gracefully pendent from every neck; in short, the whole paraphernalia of puppyism are displayed here in the greatest possible profusion. Such is the foreground of this checquered medley of thoughtless beings, who have withdrawn our attention from the principal object of the scene.

Short as our digression has been, Mr. Colles has already described the symptoms and detailed the treatment of perhaps five or six different forms of disease; and having unloaded his memory of a variety of information, he has laconically consigned the hopeless case to the grave. In this dogmatic effusion, books, authors, and authorities, are all run over, to arrive at the one arbitrary and everlasting conclusion,—"The truth is, Gentlemen, those men knew nothing of the matter!" What an inducement to a class to read! But perhaps he has not reflected on the dangerous consequences

of thus indiscriminately censuring, before a youthful audience, the labours of the living and the dead; if he had, we are sure the innate rectitude—the *mens conscia recti*, which is no less conspicuous in all his actions than on the azure of his carriage-door, — would have prevented him from falling into so obvious an error. He should recollect that while he is battering down the reputation of others, he is sapping the foundation upon which his own authority rests. It has been justly remarked, that man is an imitative animal,—a circumstance in his natural history which Mr. Colles seems to forget, or he would not teach, by his own example, a doctrine which, had he inspected the countenances of his auditors, he must perceive was often turned against himself. Few of his pupils, who have sat out his lectures for a season, that do not make allowances for those occasional bursts of invective and exaggeration in which he delights to indulge. There are many peculiarities in his manner of lecturing; or, perhaps, his manner is in every respect peculiar to himself. We know not whether he composes his discourses or not, but certain we are that arrangement forms no part of his system of composition. So completely destitute are they of order, that no person, however versed in medical science, or the history of disease, could guess, from one sentence, what might probably follow. One transition succeeds the other with a rapidity and abruptness which must surprise every auditor, whose mind has been accustomed to move in the measured pace of regularity. He is never at a loss for appropriate terms to express his meaning; and though he evidently labours to comprise a great deal in a short space, the very effort is often at the expense of offensive diffuseness. Having premised some general principles, fiction or reality supplies him with a case. This offspring of his fancy he places in as many points of view as his invention can suggest. He seems to think that his observations should be all original, and they usually are so, merely because he wishes they should differ from every other authority. As he proceeds in his narrative, gloomy as if the spirit of Monk Lewis had breathed upon every period, the clouds darken, dangers thicken, things grow worse. Try every expedient, make use of what remedies you please, 'tis all in vain; for the melancholy spectre of his brain was predestined to destruction, and the unfortunate case only detailed to terminate in death, "but from what cause he cannot tell." Extremes, it is said, meet; and after having brought his patient, "per tot discrimina rerum," to the verge of dissolution, lo! he recovers, and again the student is consoled with another "why he cannot tell." Thus from one

end of the discourse to the other, does our learned professor labour in an intermittent of scepticism and despondency, or sink into the *coma* of paralyzed astonishment. A ray of confidence or hope seldom glimmers through the dark vistas of this gentleman's lectures. His instructions are mostly of the negative kind; he tells you every thing you ought to avoid, seldom any thing you should follow. It is singular he places no reliance on the efficacy of medicine while in the lecture-room; yet his prescriptions in private practice would seem as if he took into consideration the destitute state of our numerous apothecaries. Contrast is another weapon which Mr. Colles wields with peculiar dexterity. For this purpose, he disinters from the grave of antiquated practice some absurd proposals; perhaps the offspring of closet meditations, and placing them beside some improvement or discovery in modern surgery, it is quite amusing to hear him comment upon the ludicrous comparison, and to see with what a gusto he enjoys the imaginary triumph. It is only on those emphatic occasions that his leucophlegmatic countenance ever betrays any symptoms of internal agitation, or that a rush of the vital current of the heart diffuses a blush over the habitual and marble-like paleness of his face. Having seized, however, on some unfortunate theorist, a momentary flash of indignation lights up his rigid features; and like one of those birds peculiar to the Irish shores, that soars into the clouds to destroy its prey by letting it fall upon the rocks below, he gradually poises himself upon the wings of self-sufficiency and fancied superiority, until his vengeance, from exertion, becomes expended, and then dashes out his victim's brains upon some rugged common-place of contumelious reprobation. To him the surgical practice of every person and every country seems obnoxious; but that of France is his aversion. The latter prejudice, however, is not confined to him alone; for every thing Continental has an antimonial operation on the orthodox nerves of the profession in Ireland. It is a littleness which deserves to be treated with silent contempt. If the nature of our subject did not preclude the introduction of politics, we could easily assign a reason for this hatred of *popish* surgery.

We believe the opinions of Mr. Colles, upon the subject of professional education, are opposed to those entertained by the majority of the body to which he belongs. But we are not a little surprised that he has not taken some active means of effecting what he considers would be so conducive to the interests of society and the reputation of the College. The remedy is in his own hands whenever he chooses to make use of it; for we have

no hesitation in declaring, that if he withdrew his services from that institution, his secession would be its ruin, for there is not another individual in the profession here capable of supplying his place. Who, for instance, could have the patience to sit out the drawling of a Todd, or abide the flatulent phraseology and oratorical form of Mr. Kirby?—Crampton, to be sure, might give us the poetry of surgery clad in his double mail of Siberian furs; but we doubt much if the weight of a professorship would not crush the flimsy frame of wire and whalebone that supports his studied pomposity. And should the College, in its folly, ever elevate our renowned demonstrator, Mr. Harrison, to the chair, who would withstand his torrent of words, and calmly listen to bones and splints, remedies and disease, all harmoniously arranged in jig-time to the tune of "*The Grinder?*"—Under these circumstances, why does not Mr. Colles commence the work of reform? He has only to act decidedly, and success must attend his exertions. The field is open to him; let him therefore proclaim for the opening of the Museum, the establishment of a library, and education by classes. Supported by the strength of public opinion, the petty tide of monopoly and exclusion would roll harmless at his feet, as the wave dashes innocuous against the rock. While our heart can feel, or our hand direct a pen, he may be assured of our support. As to the little we have done on a former occasion, its beneficial effects are already beginning to appear; but we advise those gentlemen* who would fain appear regardless of our efforts to be more on their guard, for our labours have only commenced.

We have dealt pretty freely with the faults, or rather the foibles, of Mr. Colles's character; but who, in this benighted part of the world, possesses in such abundance the qualities of redemption? Without what may be called the philosophy of his art, without a particle of that enthusiasm which reconciles us to the errors of a great man, without many books, and paying less attention to their contents, he is still the laborious, shrewd, observing, matter-of-fact, and practical surgeon. As an operator, he has many equals, and some superiors; but in advice, from long experience and a peculiar tact of discovering the hidden causes of disease, he has scarcely a rival. If the case were otherwise, it were to be wondered at indeed. Any

* When we come to treat of the Dublin Hospitals, we shall take an early opportunity of returning Dr. Graves our thanks for his gratuitous notice of the sketch of R. C. S. in "*The Lancet.*" As he is too minute an object himself for the pencil, we shall merely point him out as a *molecule* in the mass of * * * that preside over the New Meath Institution.

person who has spent so long an apprenticeship to his art, and under circumstances so favourable to the acquisition of knowledge, must profit by such advantages. His opportunities were of the first order for improvement,—an early education under an eminent surgeon, at an extensive hospital at which he became resident; and, subsequently, visiting surgeon, along with an extensive private practice, and a professorship of about twenty years' standing,—must confer upon any individual so favoured advantages the most substantial. His labours seem to have little impaired a constitution which promises to keep for many years in sickening suspense the ambitious expectants of office, who, of course, await his removal in anxiety, to ascend another link in the scale of professional eminence. Many anecdotes, illustrative of his character and the difficulties which he experienced in early life, are in circulation, but they are not worth the trouble of recording. Perseverance, however, and connexion, ultimately turned the scale in his favour; and he now stands at the head of his profession in Ireland, a living exemplification of the truth of the old adage—

"Labor omnia vincit improbus."

ERINENSIS

HUNTERIAN ORATION.

By Mr. Cline.

Delivered at the Royal College of Surgeons, Feb. 14th, 1824.

At three o'clock, the doors of the College were thrown open, and, in a few minutes, all that part of the theatre usually appropriated to members was filled. The remainder of the theatre continued to fill rapidly, and long before four o'clock, the hour fixed for the commencement of the oration, every part of it was crowded. Several visitors of distinction were present on this occasion, which is generally supposed to afford the best opportunity, not only of displaying the triumph of English surgery in the attainments and discoveries of the extraordinary individual to whose memory the oration is devoted, but also of attracting, in some measure, the public attention to the talents and attainments of the living members of the profession.

Shortly before four o'clock, Sir William Blizard distinguished himself by coming forward, and desiring the members of the College to take off their hats. There were a few members belonging to the Society of Friends who were covered at the time Sir William Blizard advanced, and as they

continued to wear their hats, Sir William exclaimed, "I desire you will all take off your hats!" These words, addressed generally to the whole assembly, were delivered rather in the peremptory tone of a pedagogue domineering over a parish school, or a crier enforcing respect to the court at the Old Bailey, than that of a member of the College addressing a body of gentlemen, between whom and himself there was no sort of inequality. The command was, of course, treated either with silent indifference, or unequivocal marks of derision; Sir William pointed his finger in a minacious manner at the gentlemen to whom we have alluded; and it was not till some one hinted to him that they were Quakers, that he desisted from exposing himself to the ridicule of the assembled College. We should not have considered this incident worthy of notice, but that we were concerned, on such an occasion as this, to see a member of the profession rendering himself so conspicuously absurd; and we trust that this gentle application of *The Lancet* will be attended with salutary effects.

At four o'clock, Mr. Cline entered the theatre, and proceeded to address the College to the following effect:—

Gentlemen.—This anniversary Oration was founded to commemorate the birth of JOHN HUNTER; a man whose superior mental powers have contributed more to elevate the profession of Surgery, than those of any other individual. Such, indeed, was the superiority of his talents, that he is justly entitled to be distinguished as a man of genius. This is a title which should be applied only to men of transcendent abilities, on whom mankind in general have agreed to confer it; such men, for instance, as Locke, as Newton, or Harvey, of the superiority of whose powers there can be no dispute. Genius, however, is a term which has been vaguely and generally used, and as there will be frequent occasion to introduce it in the course of this oration, it may seem proper that it should be defined. To explain it adequately might be difficult; but it fortunately happens that one of the greatest geniuses which this or any other country has produced, has given a description of it. The description is indeed given in the figurative language of poetry, and on that account may not be so immediately obvious, as it might have been, if delivered in more simple and

unadorned language. I will, however, take the liberty of reciting his words,—

The Poet's eye, in a fine phrenzy rolling,
Glances from heaven to earth, from earth to heaven,
And as imagination bodies forth
The forms of things unseen, the Poet's pen
Turns them to shape, and gives to airy nothing
A local habitation, and a name."

This passage of Shakspeare is not more poetically beautiful, than philosophically just. It accurately describes the progress of thought in the mind of the man of genius during his most sublime conceptions; it delineates all the great qualities of mind which constitute genius —enthusiasm — expansion of thought—fertility of invention, combined with accurate judgment—the capacity of comparing, selecting, arranging, and combining those ideas, which, when embodied, form a work, that excites the admiration of mankind. This description may appear to be better adapted to poetry, than to other arts or sciences; but, if it is properly considered, it will be found to be equally applicable to all; for the same powers of mind are equally required in painting, or sculpture, or architecture, as in poetry; and they who excel in any of these arts must possess the powers which constitute genius. This is not only true with respect to those arts which are called imitative, but it equally applies to the sciences, in which the same powers of mind are exerted, though in a different direction. As an illustration of what I have just said as to the same powers of mind being applicable to the arts of poetry and painting, I need only direct your attention to the picture behind me. (The Orator pointed to the admirable portrait of John Hunter, by Sir Joshua Reynolds, which adorns the wall of the theatre.) That picture presents to you an excellent representation of the man to whose memory this oration is chiefly devoted. Those who had the happiness of knowing him, cannot but be struck with the fidelity with which his features have been transferred to the canvass. He is represented as sitting in the easy attitude in which he usually sat, when thinking; and the painter has not only accurately exhibited his features, but the expression of his eyes and countenance shews that he is thinking; the painting conveys to us the idea of a man absorbed in thought. The genius of the painter is particularly seen in the general expression of the countenance—

in the elevation of the eyebrows, and the direction of the eyes, which the poet has so beautifully described as the attributes of genius. The artist who was capable of producing a picture like this, must have long and deeply studied human nature; he must have been well acquainted with its laws, or he would have been unable so completely to express the character of the man. That Mr. Hunter is entitled to the character of a man of genius, will be shewn by taking a short review of his life; the progress of his professional career will strongly mark how well he was entitled to the character so admirably described by Shakspeare. John Hunter began to study his profession at a mature period of life, being twenty years of age when he commenced his studies in the school of his brother, Dr. William Hunter, who excelled as a teacher of anatomy and physiology. He soon shewed in that school the superiority of his talents, and in a very short time excelled in dissecting and making anatomical preparations, in doing which he greatly assisted his brother Dr. William Hunter, in the formation of his Museum. In these employments, and also in assisting his brother in the task of anatomical tuition, he continued ten years; during which period he was constantly engaged in procuring every animal within his reach, for the purpose of dissecting and comparing it with the human subject; and forming that vast collection of preparations in illustration of comparative anatomy, which is now in the Museum of the College. In making these preparations, he was at the same time prosecuting his inquiries into the animal economy, many parts of which, that were before very imperfectly understood, he clearly explained. Of the extent of his researches, an idea may be formed from the accumulation of specimens, amounting to more than 17,000, which he left at his death, and which he had arranged according to a system peculiar to himself. He divided this vast collection into four classes, the first of which contained those specimens which were to explain the parts of animals immediately necessary to the preservation of life; the fluids and vessels by which life is immediately supported. The second class consisted of all those organs which supply the waste of the body, by means of nourishment, in the investigation of which he explained the process

of digestion in a far more satisfactory manner than it had ever been before explained. In the third division, he formed a large collection of specimens, illustrating a still more difficult part of the animal economy, namely, the nervous system; shewing the distribution of the nerves from the brain, the comparative arrangement of these parts in different animals, and by what means every part of the animal economy was connected one with the other, so that a general intelligence was kept up throughout the whole In this class he also introduced all the organs of sense, and the variety of these in different species of animals by which a communication was kept up between the whole animal economy of nature. The last class illustrated the means by which every species of animals is reproduced, and was devoted to the organs of generation. The extent of his mind was not however confined to the animal economy; it embraced also the vegetable economy of nature, and in the investigation of this subject he made a great number of experiments, illustrating the vital power in vegetables, as well as in animals; for although there is so great a disproportion between the powers of different species of animals, and between those of animals and vegetables, yet in some respects they are uniform in all; that is, they have all certain powers by which life is supported, and by which the species is re-produced. But, Gentlemen, great as the work of forming this immense collection may appear to be—great as was that expansion of mind which enabled him to explain the animal economy in so superior a manner, these labours were only preparatory to still greater exertions which he had in contemplation for the advancement of his profession.

Having carefully watched, for so great a length of time, the functions of the animal economy, and being so thoroughly acquainted with the structure of the human body, he was enabled to distinguish, with a great degree of accuracy, every change which the body undergoes in a state of disease, which before his time was not at all understood. Those who are acquainted with the ideas of surgery which prevailed before John Hunter instructed mankind, are aware how very crude and imperfect those views were with respect to all these circumstances. After he had prosecuted his inquiries for a

considerable length of time, having had the advantage of attending the hospitals in London, as well as of dissecting with his brother, he at length formed a course of lectures on the practice of surgery. It is to be observed, however, that he did not begin to deliver these until he was forty-seven years of age, so that he was twenty-seven years employed in preparing the materials of the course. Extraordinary as it may appear, his professional reputation was so inconsiderable at this time, that although he issued advertisements to give a public course of lectures, the number of pupils who assembled at his first lecture did not amount to twenty. Of that number, he who has now the honour of addressing you was one. I had the happiness of hearing the first course of lectures which he delivered. I had been at that time for some years in the profession, and was tolerably well acquainted with the opinions held by the surgeons then residing in the metropolis who were most distinguished for their talents; but having heard Mr. Hunter's lectures on the subject of disease, I found them so far superior to every thing I had conceived or heard before, that there seemed no comparison between the great mind of the man who delivered them, and all the individuals, whether ancient or modern, who had gone before him; for although the profession of surgery has been cultivated more than two thousand years, this single individual has probably done more towards establishing surgery, as a science, than all who preceded him. He commenced this course of lectures by establishing the principle of the changes which take place in different parts of the body in consequence of violence, and afterwards explaining the means by which such injuries may be repaired. This was the foundation of the treatise which was afterwards published on the blood, inflammation, and gun-shot wounds; to which subject he particularly directed his attention, when he was engaged as a surgeon in the army at the siege of Belleisle, where a great number of wounded men, after a very severe action, were placed under his immediate care. Although this part of the course of lectures was digested at an early period of his professional life, he had not the confidence to bring it under the notice of the public, and though it was printed at the time of his sud-

den death, it had not then appeared. Large and excellent as this work is, it is proper for me to observe, Gentlemen, that it formed but a small part of the lectures which he delivered. There were other parts of the course, of the highest importance in a professional point of view, and the publication of which would have been extremely desirable. The lectures which he delivered on morbid poisons, on scrofula, and on the diseases of the bones, deserved particular attention; the ideas of surgery which prevailed with respect to diseases of the bones were so exceedingiy imperfect, until he explained in what manner the morbid changes in those parts were produced, that all the knowledge of that subject preceding his time, may be regarded as of little value.—By his accurate knowledge of all the functions of the animal economy, he was enabled clearly to explain all the changes which take place in these parts in a state of disease, and to lay down a rational foundation of cure. Such were the great discoveries and improvements in surgery made by this extraordinary man, that, since his opinions have been promulgated, it may be truly said that no work can be published on the science of surgery, and no lecture can be delivered, without being greatly indebted to him, if the work be worth the trouble of reading, or the lecture the time of attending. —He has laid the foundations of surgery in truth and nature, and his principles will last as long as nature herself exists; the truths are eternal. The complete revolution produced in the minds of professional men by the discoveries which the great mind of Hunter was capable of effecting, affords one of the strongest proofs of his title to the character of a man of genius. The distinguishing characteristic of his mind was undoubtedly enthusiasm—it was the enthusiasm of genius which prompted him to apply his mind with so much ardour to the pursuits which led to these important discoveries. In these pursuits he was engaged early and late, to the last day of his life. He died at the age of sixty-five; and those uninterrupted exertions were continued therefore during a period of forty-five years. From an early hour in the morning until midnight, or later, he was constantly employed either in dissecting, or writing, or reflecting on the various subjects to which his attention was di-

rected. His ardent enthusiasm—his unbounded expansion of mind, are seen in his arrangement of the preparations illustrating the animal and vegetable economy—in the comprehensive view which he took of all living nature. His fertility of invention is demonstrated in his works, in which we find a great number and variety of ingenious experiments which he contrived, in the course of his inquiries into the complicated actions of the living powers. His investigations of comparative anatomy shew the great powers which he possessed of selecting, arranging, and combining his materials, for the purpose of explaining the whole of the animal economy of nature. Thus we find the exertion of his extraordinary powers of mind exactly corresponding with that which the poet describes as directing the operations of genius; for these effects are produced by the same powers which constitute poetical excellence, but directed to a different channel. Genius, then, consists in that combination of powers, which is capable of producing effects which by common minds cannot be well conceived. But this term is often applied to men possessed of no such powers; that is, men who are only possessed of talent, are frequently described as possessing the gift of genius. But talent, Gentlemen, is merely the power of expressing well that which another has conceived; it is the power of representing and explaining that which has been discovered by others. The man of genius shines by a light emanating from his own mind; but the man of talent shines by the reflection of the light which he has received from the man of genius; so that in comparing the minds of men with the formation of the universe, the man of genius may be considered as a fixed star, from which light is constantly emanating, and the man of talent as a planet revolving around it, and receiving the light which is reflected from the fixed star of genius. The beneficent Author of nature has thus justly distributed the powers of mankind in such proportions as are fitted to the wisdom of his purposes. The operations of genius may be regarded as the light emanating from the fixed stars in the universe, which is more extensively diffused to mankind by the reflection of talent. The dissemination of good arising from this cause, is not merely confined to arts and

sciences; it may be seen also in the more extensive operations arising out of the institutions of government. Of this truth our own country affords a most striking example; for the greatness of this nation may justly be ascribed to the genius of one man. I allude to that extraordinary man, Alfred the Great; it was he who first framed the English constitution, and from whom all the power and all the greatness of this nation originated: to the great powers of his mind England is indebted for all its prosperity. When Alfred ascended the throne, this nation was in a most disorganized state. So severely, indeed, was that monarch harassed by an active, enterprising enemy, whose principal object was plunder, that he was driven from his throne, and under the necessity of seeking a retreat; but to a mind like his, such adverse fortune served only to develop his extraordinary powers, and during his retreat he had time to form those plans which he at length so wisely and energetically executed, that he succeeded in expelling the enemies of his country, and reconquering his throne. When he had thus established his power, his greatness of mind began to discover itself in the formation of a system of government; and hence emanated the English constitution. Great minds always move on simple principles. It has been observed that they possess the power of unravelling what is difficult, and of reducing what is complicated to first principles. Accordingly, the genius of Alfred, in the formation of a system of government, discovered that fundamental principle which, though apparently simple, is the most powerful and energetic in its effects, which it is possible for the mind to conceive. This was the principle of governing all, by the energies of all—the principle which constitutes the foundation of the English constitution. In the prosecution of this object, Alfred fixed upon a firm basis the meetings of the Wittenagemote, where the laws were enacted. He distributed the administration of justice among the people, by one of the wisest and most excellent institutions that was ever conceived—the formation of juries. But, as the persons forming the juries, from want of education and other causes, were not always themselves competent to decide, he appointed judges to regulate the principles and practice of courts of jus-

tice. These institutions formed a mutual check upon each other, for Alfred perceived that if the power of deciding had been left to judges, such was the weakness of human nature, that corruption might have been expected to creep into the administration of justice; he therefore allotted to juries the power of pronouncing a decision, subject to a superintending power in the judges to explain the laws, and regulate their practice. The limits of these powers were not, however, at first so well understood or defined, but that judges, in some instances, attempted to exceed them by controlling the verdicts of juries. When these instances of corruption were detected, Alfred made severe examples, and several judges of that day were executed, with a view of deterring others from similar practices. This may be considered a harsh measure, but it was necessary for the security of the life and property of the subject. It is the continuance of these institutions, and the principles of government acted upon by Alfred, which have rendered the benefits of the English constitution superior to those of any other in the world. We find, however, in the history of this country, that frequent attempts have at different times been made to destroy these institutions. Thus the Norman conqueror endeavoured to eradicate the English constitution, but it was so strongly implanted in the hearts and affections of the people, that no power was capable of effecting its destruction, and so general a resistance was made to the attempt, that the sovereign was under the necessity of desisting from his purpose. A memorable instance of the same kind occurred in the reign of king John, when a similar attempt met with such general resistance that the king was under the necessity of signing Magna Charta, to appease the indignation of the people. At a later period, the attempt which was made by one of the Stuarts to establish despotism in the country, terminated in the expulsion of that misguided monarch from the throne. The origin of all the blessings which this nation enjoys may thus be traced to the fundamental principles of government, established by the great mind of Alfred. The advantages which we have reaped from those invaluable institutions, for more than nine hundred years, are likely to be still farther extended by

the propagation of the same principles over a great part of the world; for we find the light of Alfred making its way into the western hemisphere, and illumining ten millions of people, who have hitherto been kept in a state of darkness under the thraldom of priestcraft and despotism; but who are now breaking their chains asunder, and proving, by the benefits in which the light of genius enables them to participate, that it is boundless both in extent and duration. The character of Alfred is, therefore, regarded by the British nation with veneration and gratitude; all historians agree in the tribute which is due to his extraordinary powers of mind; and his name has descended to posterity justly exalted above all Roman—above all Grecian fame.

Gentlemen, since the last anniversary oration was delivered in this theatre by Sir William Blizard, the profession and the public have suffered a great loss in the death of Dr. Baillie;—a man whose moral virtues, and whose great abilities have induced general lamentation, especially among those who had the happiness of knowing him. His character has been drawn with considerable ability in several of the periodical publications of the day; it has also been drawn by the masterly hand of Sir Henry Halford, at the Royal College of Physicians; and it is to be hoped that the picture portrayed by one who was so intimately acquainted with him, will descend to posterity, and form a part of the history of the country. I had frequently the happiness of meeting him, for in the discharge of our professional duties we were often called upon to act together. During more than the last thirty years, I have been frequently in the habit of attending consultations with him, in which, after making the necessary inquiries as to the symptoms, and the state of the disease to which his attention was drawn, he formed the clearest opinions, which he delivered with a perspicuity and ability peculiar to himself; opinions which almost always met the approbation of those who were joined with him in consultation, and which were always calculated, as far as possible, to prove beneficial to the patient. His great worth, his moral rectitude, made so strong an impression on all who were acquainted with him, that his death was attended with general and deep regret.

Gratitude, respect, and esteem, require that my testimony should also be given to his worth. In my own person, I am particularly indebted to him; for, during a severe and dangerous illness with which I was attacked in the last summer, his friendship and kindness caused him to visit me when he was himself in such a state of health, that he could with great difficulty ascend the staircase. After such an instance of friendship, it is but simple gratitude in me to express my opinion of the worth of this distinguished man.

[The close of the oration was followed by general applause. Sir William Blizard, indeed, again came forward, and desired that there might be no applause; but this injunction was, of course, utterly disregarded.]

LECTURE XXXIV.

GENTLEMEN,—I shall proceed this evening to consider affections of the globe of the eye, and first of

Inflammation of the Cornea.

At the outset, in inflammation attacking the transparent cornea, there is a hazy appearance, the cornea loses its natural lustre, and in a short time there may be discovered on its surface, vessels carrying red blood, and then the symptoms will be the same as those of inflammation in general; the patient will complain of intolerance of light, and also have effusion of tears.—When the inflammation of the cornea continues, matter very frequently forms between its lamellæ, and the appearance which it then assumes is called *onyx* or *unguis*, from its resemblance to a nail; the matter is to be very distinctly seen in the transparent part of the eye, and gradually extends till it occupies one-third or fourth of the cornea. If you place the eye in profile, you can generally observe yellowish spots which are usually seated at the anterior part of the cornea, and if you employ gentle pressure with a probe, the fluid may be felt fluctuating within. In the various positions of the head, the matter does not shift its situation, but remains in the same spot. By proper treatment the matter often becomes absorbed, but it not unfrequently makes its way externally, or an opening is formed internally, and the matter then is effused into the anterior chamber of the eye. I shall defer speaking of the treatment of this

inflammation till I have considered the next subject,—

Ulceration of the Cornea.

This disease is the common consequence of inflammation of the cornea; but it is very frequently produced by the contact of matter in purulent ophthalmia, and the irritation of lime, or by any sharp-pointed bodies which may be insinuated into the cornea; or, in fact, any irritating substance, mechanical or chemical, that may be introduced into the eye. The inflammation produces the formation of pus—this breaks, and an ulcer is formed. In ulcers of the cornea you will find the edges rugged, uneven, and elevated, the ulcer itself having an ash-coloured appearance, and the patient complaining of great pain; there will also be a discharge of a good deal of acrid and irritating matter. In general there will be no difficulty in distinguishing ulcers of the cornea; all you have to do is to put the eye in profile, and take a side view of this organ, and you will see the ulcer with the appearances I have described.—The situation of the ulcers of the cornea varies; very frequently they are at the superior portion, and affecting only the external lamellæ, in other cases spreading over the whole cornea, and penetrating into the anterior chamber, by which means the aqueous humour escapes, and the iris is often protruded; sometimes even the opening becomes enlarged, and the crystalline lens and vitreous humour escape. The ulcers vary in their appearance, some being large and others small, and those which are of small size, on cicatrization, do not materially obstruct vision, whilst those that are large, when healed, produce a nebulous appearance which destroys the power of sight.

Treatment of Inflammation and Ulceration of the Cornea.

The treatment required in inflammation of the cornea does not differ materially from that of inflammations of the conjunctiva, or any other part of the eye, and therefore it will not be necessary to recapitulate the means necessary to be adopted; you must rely on the efficacy of a strict antiphlogistic plan, and when the acute inflammation has been subdued, on the use of mild astringent collyria. When ulcers, however, form in any part of the cornea, it will be proper to use active means, if they be accompanied by acute

inflammation; but most frequently they are accompanied by chronic ophthalmia, and have a disposition to spread rather than heal. — In these cases astringent lotions will be of great service; but of all remedies in ulcers of the cornea, the nitrate of silver is the one on which you are to depend; it is generally used in a state of solution, about two grains to an ounce of water, or it will be better to begin with a grain to an ounce, regulating the strength in proportion to the degree of irritation it may produce. Scarpa gives the preference to the caustic itself in the treatment of the ulcers of the cornea; the caustic is to be cut to a sharp point, and the ulcer to be touched with it. An eschar forms, which in the course of two or three days falls off, and the symptoms of the disease return as before; the caustic is again to be applied; and to be repeated a third time, if necessary. The ulcer, by this means, loses its ash-coloured appearance, the edges become regular and even, and it rapidly heals. When ulcers of the cornea are attended by acute inflammation, it will be necessary to employ bleeding, by leeches, before the use of astringents, and at the same time to keep the bowels regular by mild aperients. — During the progress of the ulcers, it will be necessary to watch them very closely, and examine them frequently, but in doing it great caution must be used lest the eye-lids become everted. When the ulcers heal, it is by cicatrization, as in any other part of the body, and afterwards specks are left which are nothing more than rounded spots of coagulable lymph, and are denominated *leucoma* or *albugo;* and in these cases the rays of light are not prevented entering the eye, except when the spots are on the axis of vision, and then they are interrupted.

The next disease to which the cornea is subject is

Staphyloma.

In this disease, the cornea becomes opaque, considerably elevated, and altered in texture. The eye-lids are prevented from being closed; there is perpetual irritation kept up by the friction of the palpebræ on the ball. This disease frequently comes on after small-pox, and is one of the sequelæ belonging to that formidable complaint. By the separation of the lids, extraneous bodies often enter the eye; irritation is produced by the friction of the lids and eye-

lashes—and thus a considerable degree of inconvenience is produced to the patient, and the eye kept in a state of chronic ophthalmy; and the sound eye becomes sympathetically affected.

In this disease, the iris often protrudes; the vitreous humour is altered in texture; and the crystalline lens is projected forwards. In this complaint, nothing can be done for the restoration of sight; and the only plan of treatment will be to remove the staphylomatous part, so as to return the eye within the orbit, and permit the use of an artificial eye. The operation is exceedingly simple: — the surgeon first passes a needle with a ligature, through the staphylomatous part, in order to steady the eye,—and then with the other hand, takes the cornea knife, and removes as much of the projecting part as may be necessary; the operation gives little pain; it generally happens, that the iris adheres to the cornea, and that a portion of it is removed. The crystalline lens escapes, together with a portion of vitreous humour, and the eye collapses, so that when the part is healed, an artificial eye may be worn. These are now made so much to resemble the natural eye, that they may be worn without the deception being detected. This is the only treatment that can be adopted with any relief to the patient.—The cornea sometimes becomes conical, or of a conoid shape;—in these cases, the cornea loses its natural lustre,—the sight becomes impaired. Glasses afford no relief to the sight in this altered shape of the cornea; nor is there any remedy with which I am acquainted that does. I have seen several cases of this kind, and have not known any good result from the treatment that has been adopted. Having considered all the affections of the cornea, I shall proceed to those of the other parts of the eye.

Inflammation of the Iris.

Inflammation of the Iris, or as it has been latterly called *Iritis*, is a peculiar and specific inflammation of the eye. The symptoms attending this complaint are in some cases with great difficulty recognised. In looking into the eye, you see the iris changed in colour, or having a brownish hue; or rather a reddish brown colour, (this, however, varies according to the natural colour of the iris,) from the increased number of vessels on its surface carrying red blood.

The iris itself is altered in texture, being puckered and thickened. These appearances are soon removed, and deposits of yellow lymph, resembling yellow tubercles, will be seen on the iris; the pupil becomes irregular, and altered in shape, and the pupillary margin of the iris thickened, and turned back towards the posterior chamber.—These then are the principal symptoms by which you recognise iritis: but besides these, the aqueous humour becomes turbid, and the ciliary vessels on the surface of the sclerotic, form a zone of vessels immediately surrounding the outer part of the cornea, which have a different appearance from those in inflammation of the conjunctiva, the latter having a tortuous course, whilst the others go in a straight direction. The conjunctiva partakes of the inflammation, and assumes a red appearance. The pain in the eye is not acute, but the patient cannot bear the light. There is also considerable constitutional irritation or fever, which may be known by the state of the pulse, and other symptoms. Inflammation of the iris often comes on from very slight causes; it occasionally happens in those who have been under the influence of mercury, and in persons of a scrofulous diathesis, or when mercury has been pushed to an undue extent.

Iritis has, in consequence of its occurring so frequently after syphilis, been classed as a secondary symptom of that complaint; I have, I must say, considerable doubt on the subject, for I have never met with it in a person labouring at the same time under any other secondary symptoms of syphilis, with eruptions or nodes on the bones; and also I have never met with a case of iritis after syphilis but where mercury had been previously given, and therefore I cannot say whether the inflammation of the iris was the effect of the mercury, or of the original disease for which it was given. Iritis is not unfrequently accompanied by inflammation of the tunics of the eye, what may be called *ophthalmitis*, or deep-seated inflammation of the globe of the eye. In this complaint, the sclerotic appears reddened —the cornea is dull, and the capsule of the lens itself becomes opaque—all these participate in the inflammation.—There is deposition of lymph on the edges of the iris, and there are also adhesions of it in some places to the crystalline lens. The sclerotic coat, how-

ever, is particularly inflamed; the vessels may be seen carrying the blood in a straight course, whilst those of the conjunctiva are tortuous. There is pain in the eye, intolerance of light; also these symptoms, together with a turbid state of the humours, are sufficient to inform one of the presence of inflammation of the sclerotic coat, the patient also labours at the same time under great febrile excitement. This inflammation is often attended by a disorganization of the organ. The result of this severe form of inflammation, if it be not checked, is effusion of lymph or matter into the anterior chamber of the eye, producing what is technically called *Hypopium*.—In these cases the matter may be easily observed, and sometimes there is so much as to conceal the edges of the pupil and the iris.

Treatment.

Of course the first part of the treatment will be, to relieve the irritation of the part by blood-letting, both general and local; and, in fact, all the steps of depletion must be adopted as in other inflammations of the eye. But there is one remedy above all others in this complaint on which you are to rely, and that is mercury; it must be given so as to affect the constitution, till the gums and mouth are sore, or the saliva begins to flow, which will be the signs of it. In iritis, this medicine must be given, let whatever quantities may have been taken before. The best form in which it can be exhibited is that of calomel: let it be given internally after the bleeding, in the dose of two or three grains combined with about a third or a quarter of a grain of opium, so as to prevent its acting on the bowels. In order that the calomel may affect the system, it must be given every fourth or sixth hour, till the mouth is sore; in more chronic forms of this complaint, it may be given less frequently. As soon as the system has become affected, you will see the zone of vessels disappearing, the lymph absorbed, the aqueous humour becoming clear, and the cornea losing its hazy appearance. Other remedies have been recommended, but there is not one on which you can rely but the exhibition of mercury. The Belladonna will be found a very useful adjunct in this complaint; by dilating the pupils, the adhesions are often prevented from forming between the iris and capsule of the crystalline lens, and when they

are formed, it tends to elongate the adhesions. The belladonna should be applied in the form of extract around the eye, morning and evening.

Amaurosis.

By amaurosis, I mean partial or total loss of vision arising from paralysis of the optic nerve or retina; and this is produced by a congestion of the vessels of the part, or minute alteration of its structure. The symptoms distinguishing this complaint are few, and therefore require to be well known. The pupil is generally dilated, and motionless: the iris is nearly immoveable, acts very little, and vision is completely destroyed. There is also slight strabismus. In amaurosis, there is frequently the sensation as if a cloud were before the eye, which is termed *caligo*, and there is often a greenish appearance of the humours, which is named *glaucoma*. This depends on an alteration of the lens, or an alteration in the structure of the vitreous humour. The persons subjected to this complaint are those who have been in the habit of viewing minute objects, or exposing the eyes to strong light. Persons affected with amaurosis, are frequently troubled with false appearances—as flashes of light, or balls of fire before their eyes. I shall divide the causes of amaurosis into three parts:—1. Those which affect the retina or optic nerve.—2. Those affecting the brain, or that part of it from which the optic nerves arise, the *thalami nervorum opticorum*. And, 3dly. Those affecting the body at large, or some particular organ, and thus sympathetically affecting the eye.

Mr. GREEN then entered into an examination of amaurosis when arising from either of these three different causes; and also stated the chance of success in the treatment of each. This, he said, must depend on the remediable nature of the cause; and, on the disease being attacked in an incipient stage.

LECTURE XXXV.

IN the preceding lectures, Gentlemen, I have described the affections of the coats of the eye; this evening, I shall proceed to treat of those of the humours of the eye. Very little, however, can be said of the aqueous and vitreous humours, as most of the diseases to which the humours are subject, attack the crystalline lens or its capsule; therefore, I

shall chiefly direct your attention to them.

Hydropthalmia.

The aqueous humour is sometimes the subject of an accumulation which is known by the name of *Hydrophthalmia*, or dropsy of the eye; and consists in an increased secretion of this humour. The symptoms of this complaint are—that the eye becomes more distended than natural; the cornea widened; the sclerotic coat attached to the cornea has a blue tint or cast; the sight is affected; the motions of the iris impaired; and the disease, at last, terminates in amaurosis. On what this complaint depends, it would be difficult to say; it is generally preceded by chronic ophthalmia.

Treatment.

The remedies recommended for this complaint are various, of the most opposite kind; and have been tried generally without any good effect. Puncturing the cornea, at a short distance from the sclerotic, has been tried, and it is said with success. I have, however, seen several cases of this affection, and no benefit whatever was derived from any means that were employed.

The vitreous humour is occasionally affected. There is sometimes a deficiency of this humour, arising from part of it being lost, in the course of an operation; and the quantity lost is often so considerable, that the part supported by the aqueous humour, is not sufficiently firm to keep up the natural roundness and plumpness of the eye. The medium of refracting the rays of light is destroyed, the sight becomes impaired, and glasses afford no relief.

There is the tremulous iris after couching, arising from the same cause as the preceding affection. Another change which takes place in the vitreous humour is that known by the name of

Glaucoma.

In this complaint, the vitreous humour becomes altered in texture, more dense, and presents a sea-green hue, and the pupil is dilated. This disease has often been mistaken for cataract, and a person affected with it is frequently supposed to have a cataract in its incipient stage. On examining the eye minutely, this greenish appearance may be observed to be behind the crystalline lens, and posterior to the seat of the cataract; it may be, however, mistaken for many diseases, and

has a greater resemblance to cataract than any other. Glaucoma remains without any change by which it may be distinguished from fungus of the eye, of which I shall speak to you in another lecture. The diagnosis is not difficult. Having mentioned the affections of the aqueous and vitreous humours, I come next to consider the different species of cataract.

Cataract.

By cataract is meant an opacity of the crystalline lens, or its capsule, the cataract depending on a morbid secretion of the liquor morgagni being very rare: this is an exception, but the ordinary definition is the one I have just given. This complaint seems to have been understood by Hippocrates; but the notions of Galen and those who followed him, respecting cataract, were very confused; and it was not till the end of the 17th, or beginning of the 18th, century, that the nature of this disease began to be understood, when Mery and Maitre-Jean, and others, gave fair accounts of this complaint. The symptoms of cataract are unequivocal, and may be easily recognised. At first there is always defect of vision, and the patient sees things as through a mist, and requires a strong light to see them plainly; this symptom changes during the progress of the complaint, the patient being able to see better in a moderate than a strong light, and then a speck, or opacity in the lens or capsule, may be distinctly observed; it is generally in the centre of the pupil, and at the situation of the lens; this gradually enlarges, and in proportion as the opacity increases the sight becomes more dim, and the capability of discerning objects diminishes. In the progress of the cataract, the patient can see better in a faint than in a strong light; and this is easily explained, because in the faint light the iris dilates, and the rays of light are transmitted through the circumference of the crystalline lens, which is not yet obscured. But you see these symptoms differ in the different kinds of this disease, and this leads me to consider the different species of cataract: it is extremely important that they should be known, as the operation that it will be necessary to perform depends on the kind of cataract which exists; but it is to be observed that the criteria are, to say the best of them, very

fallible. On looking at a cataract, you cannot always be certain that it is of this or that kind, but on the whole you are enabled to give a pretty good guess. The symptom characterizing each kind will be spoken of under the different heads.

Different Kinds of Cataract.

There are four kinds of cataract: 1st, The hard or firm cataract; 2d, The fluid or milky cataract; 3d, The soft or caseous cataract; and, besides these, there is a fourth kind, the capsular cataract; the three first forming in the lens itself, and the last in the capsule. The last kind of cataract comes on after an operation, or in consequence of it, and is also found in children, when it is called congenital cataract. This kind of cataract does not differ essentially from the other forms of capsular cataract; but is called congenital, on account of its occurring at a particular period of life, or children being born with it. This form of cataract also requires a particular kind of operation, and will be particularly spoken of. Of the lenticular cataract there are three kinds, the soft, fluid, and hard. These different kinds of cataract occur at different periods of life. It is stated that the firm or hard cataract is found in advanced age, whilst the soft occurs at an earlier period. There is one circumstance respecting these different kinds of cataracts it will be proper to mention; that is, it is not at all common for one form to go into another—for the soft to go into the hard, for instance, is exceedingly rare. I allude to an opinion which used to prevail, that a soft cataract became hard, and then it was said to be ripe. This idea is now given up, and experience proves it to be incorrect.

Let us now consider the different symptoms attending the different kinds of cataract.

Firm or Hard Cataract.—In this kind of cataract the lens acquires a greater degree of density or firmness than natural; and in undergoing this change, it becomes smaller and thinner, and more concentrated. If you look at the cataract, you will see that it has not the natural whiteness of that complaint; it has a yellow or brownish appearance, the colour of amber. The next particular you observe is the interspace between the iris and front part of the lens, on account of the lens becoming thinner. The motions of the

iris are free, there being no adhesions. There is generally some degree of vision, and the patient can often discern large and bright objects, and even differences of colour, and sometimes the shadow of minute objects. When the light is faint, the patient can see more distinctly than when it is strong. This kind of cataract generally occurs at an advanced period of life. By these symptoms, then, you will distinguish this kind of cataract:—by its colour and size: the interspace between the front part of the lens and the iris; the vision being more or less distinct; and lastly, by its occurring at an advanced period of life.

Fluid Cataract.—This kind of cataract is always more or less fluid, and is called milky, from its white colour. The fluid cataract is not of equal density throughout. If you examine the eye of a patient with attention, you will see that it has a flocculent appearance, from specks or streaks consisting of solid particles of the lens, and these will move up and down in the various positions and motions of the head, and be removed out of sight; but on the head becoming steady, they again appear. This arises from their gravity; on motion, they sink to the bottom, and of course disappear. There will not be any difficulty in recognising this form of cataract. Besides these symptoms, the lens becomes enlarged and globular; and the increase of size is such, that the lens reaches to the iris, so that there is no posterior chamber at all. If you look at the eye in profile, you will see that the iris is protruded forwards; from this pressure the motions of the iris are sluggish, and in some cases prevented altogether. The size and shape of the pupil is altered. The rays of light do not pass into the eye, and the patient can scarcely tell the difference between light and darkness.

Soft or Caseous Cataract.—This kind of cataract is of the consistence of firm jelly or cheese. It is uniformly opaque, and there is a milky whiteness, as in the fluid cataract; but the spots and streaks sometimes observable in this form never shift their position, as in the other; the lens also becomes increased in size. The posterior chamber is obliterated. There is no interspace between the fore part of the lens and iris. The motions of the iris are performed with difficulty, from the size of the lens, and

the rays of light are prevented from entering. The patients sometimes cannot distinguish between light and darkness; although they are seldom so blind as this.

Membranous Cataract. — This form of cataract is not connected with the lens, but the capsule itself. This opacity may exist either in the posterior or anterior layer of the capsule, or combined with that of the lens, and thus produce cataract. In this last case there is no distinct mark of diagnosis; but when the capsule only is affected, you may offer an opinion. If the anterior layer of the capsule is opaque, it has the appearance of being superficial and close to the pupil, and appears rather nebulous. It does not quite lose its transparency, but becomes semi-transparent. When the posterior layer is affected, this appearance is deeper; being at a considerable depth, and having more or less of a concave form. There are also striæ passing in a radiated direction. If you observe, then, the opacity deep-seated, and the lens appearing concave, you may know that the posterior layer of the capsule is opaque; but when this state is combined with opacity of the lens, the diagnosis will be difficult.

Another species of membranous cataract is, when the capsule becomes opaque, and the lens at the same time absorbed, and a tough, dense, membranous substance is formed, as in congenital cataract. These are the different marks that I have to offer to you for detecting the different kinds of cataract; but you see, from the nature of the observations, how difficult it is to distinguish them. But it is necessary, as far as is possible, to be acquainted with the appearances each form of cataract presents, as the treatment or operation required must be adapted according to the kind of cataract.

Causes of Cataract.—I have not much to offer to you on this head, as the causes of cataract are in general very obscure. Cataract, however, sometimes arises from obvious causes,—injury, violence, inflammation, or sharp-pointed bodies wounding the capsule of the lens, or the lens itself, and consequently producing opacity of these parts. The opacity arising from this cause often becomes absorbed, and the case undergoes the natural process of cure without requiring an operation. It is produced too by inflammation of the globe of the eye; but

then the cataract is capsular, and not lenticular. Cataract, however, arising from these causes, is exceedingly rare; and by far the greater number of cases are produced, as it is called, spontaneously, or under circumstances which are too subtle for our cognizance. It has been said that where the eye has been tried a good deal, and subject to much exercise and strong light, as in blacksmiths, glass-blowers, &c., that cataract is produced: this is exceedingly doubtful; and if it is so, there are many cases in which no such cause can be assigned. It is also not unfrequently congenital, and of course produced from none of the causes mentioned. It also runs through families, and appears to be hereditary. It has been shewn that it may be produced by external causes which are obvious, yet it more frequently comes on without any assignable cause.

Prognosis.

Of course, by this I mean a prognosis as to the issue of the case by no other means than an operation; that is, before performing the operation, ascertaining whether service can or cannot be afforded by the operation; whether the changes which the eye may have undergone from inflammation during the progress of the complaint, or the symptoms, are such as to preclude the chance of success if an operation were performed, and destroy all hopes of vision ever being regained. Now there are certain symptoms accompanying this affection, by which you are enabled to form a pretty accurate opinion as to the issue. There are some extremely valuable observations on this part of the subject to be found in Scarpa's work on the diseases of the eye. The first circumstance which leads you to determine as to the success of the operation is, whether the loss of vision has been gradually supervening, and has always been in proportion to the opacity of the lens.—Second, whether the cataract has been accompanied by chronic ophthalmia, or any changes have been produced in the eye by it; if the cataract has been attended by a penetrating pain in any part of the eye, or orbit, or back of the head, which it will be necessary to inquire about.—Third, whether the motions of the iris are duly performed, in the different variations of the light; if not, fear may be entertained of the eye being amaurotic.—Fourth, if there is the power of dis

tinguishing between light and dark, or the colour or forms of things, or the shade of passing objects. These circumstances should be particularly inquired into; and if you find the patient has all, or the greater part of them,—that is, if the defect of sight has been increasing just in proportion to the increase of the opacity of the lens, and the patient has had no pain in the head, and the motions of the iris are free, and light can be distinguished; then you may operate, and with the chance of success, as there are no evident reasons against it.

For by the first circumstance you see that the vision has been impaired in consequence of the opacity of the lens; by the second, that there has been no disorganizing inflammation in the eye, or that the brain and origin of the optic nerves have not been affected; by the third, that the retina is sound; and by the fourth, if the opacity of the lens be removed, that the retina will be in a state to receive the impression of external objects. But these signs are not so certain as they might appear, for the iris might act, and yet amaurosis exist: and if one eye were not closed, the motions of the iris of the other might be present, by sympathy from the other. Thus it appears that the state of the iris does not always determine the existence of amaurosis. When there is cataract, the operation must be regulated by taking all the circumstances into consideration; by the figure of the cataract, whether there are any adhesions of the iris to the capsule of the crystalline lens; and especially by the patient being able to distinguish objects, and light from darkness; but though this is a favourable symptom, yet persons may have amaurosis, and be able to distinguish day from night, and even objects from one another. On the whole, it is a very favourable symptom, and when present, the operation may be performed. In general, when the case is doubtful, you had better perform the operation, of course taking care to inform the patient of the state of the case; the pain is not great, and you will not leave the patient in a worse state than before the operation. It would be extremely culpable for any one to operate where it was quite apparent that no relief could be afforded; and yet I am sorry to say, that I have known individuals operate where there was no more chance of doing good than if the

eye had been scooped out of the head—such men are unprincipled, and would undertake any thing for the purpose of gain.

Another question to be determined on is, whether the operation should be performed if one eye only is affected? The answer appears to me plain, yet there are some who contend that the operation should be resorted to when there is cataract in one eye only, and their principal reason is this; they say, that it is known a sympathy exists between the two eyes, and that if a morbid action is set up in one, it will be excited sympathetically in the other, and thus disease be communicated to the one which is sound, and an operation be required to be performed on it. I do not think myself that this is a sufficient reason, because, under so little excitement, the chance of the other being affected is slight. The disadvantages of this plan are various; I know that a sympathy exists between the eyes, and that if inflammation is set up in one, it will be excited by sympathy on the other, which may destroy the organ that is sound. But suppose you succeed, what do you effect? the focus will be different, and the patient will not be able to use both eyes at the same time. Next, where there is only one eye sound, and it performs its office well, and vision is good, it will be better to wait till it becomes dim; then the operation for restoring the patient to sight may be performed, and two chances be in the patient's favour. Therefore it seems that in performing the operation for cataract, where one eye only is affected, you expose the patient to the risk of losing the sight of both. The plan that appears to me to be the best is, not to operate except both are affected, then you may safely perform the operation.

Before speaking of the operation for cataract, it will be expected perhaps to premise by saying something of the treatment; but besides an operation in this complaint very little else in the way of treatment will be of use. Various plans of treatment have been adopted, but without success, therefore I shall proceed at once to speak of the operations. The operations for cataract are three in number,—first, depression, or couching, by which the cataract is removed from the axis of vision; second, extraction, which consists in making an incision through the cornea; third, the operation for the solution of the cataract.

Operation for Depression or Couching.

This mode of operating consists in removing the opaque lens out of the axis of vision by depressing it into the vitreous humour: this is done by a needle, of which there are three different kinds now employed, Hey's, Scarpa's, and Beer's needles. Hey's needle is about seven-eighths of an inch in length; it is rounded except at the point, where it is flat for the eighth of an inch. It terminates by a semicircular cutting edge, which ought to be exceedingly sharp.

Scarpa's needle is more slender than the other, and curved at the point. When you look at it sideways, it presents a flat convex appearance on the dorsum, it is of a triangular shape towards the point, and has also a concavity; it is sufficiently strong to depress the lens. The next is Beer's spear-pointed needle; it is narrow at the neck. I give the preference myself to this instrument; a surgeon is not so likely to wound the ciliary ligaments or processes with it. The needle is the only instrument required; some use a speculum, but, excepting in children, this will not be of much use. Previous to the operation, very little preparation will be necessary; of course, you ascertain whether the patient is in good health, see the bowels are regular, and that all the functions are properly performed. We next come to the mode of performing the operation. The light, and the position of the patient and operator, are extremely important, and all to be attended to. The light should be clear, distinct, and full, but not vivid, and it should not fall on the centre of the eye of the patient but laterally, else it would produce a dazzling, and unsteadiness of the organ. The patient should be placed on a low seat with a high back, and the head resting against it, or the body of an assistant. The operator should be on a high stool, or at least of sufficient height to enable him to put one foot on it, and rest his elbow on the knee opposite to the eye to be couched. Having thus prepared himself, the operator holds the instrument between the thumb and fore-finger, the assistant passing his fore-finger round the head of the patient, raises the upper lid by a fold of skin, and presses it gently against the superciliary ridge. The patient is now directed to look inwards towards the nose, and the operator resting his

little finger on the upper part of the chin of the patient; penetrates the sclerotic coat about a line and a half from the junction of the transparent, with the opaque cornea; and a line below the transverse diameter of the eye. In the first place, the needle is introduced here, just where the retina terminates, and the ciliary ligament commences, so that these shall be avoided; and, 2ndly, For the purpose of not wounding the ciliary artery, as it goes along the middle of the external convexity of the eye-ball, between the sclerotic and choroid coat. In using Beer's needle, it is introduced with the edge laterally, and its surface upwards and downwards, and directed towards the middle of the globe of the eye. It must be moved slightly between the fingers; a piece of ivory or brass at the handle, shewing the disposition of the cutting edges, and then the point carried inwards parallel to the iris, and so as to cover the posterior chamber; the instrument will be now visible through the pupil. When this is the case, the operator must raise the needle upwards, and then depress it downwards, and backwards, and a little outwards, by which means the crystalline lens becomes pushed into the vitreous humour. If the lens should rise from its situation, it must be again depressed, and when it is safely lodged in the vitreous humour, the needle must be withdrawn. Some continental surgeons perform the operation of *Reclination*, which consists in turning the lens over, and pushing the upper edge backwards, and the lower forwards, and likewise in puncturing the cornea instead of the sclerotic; the best plan is that recommended by Scarpa.

The after treatment is very simple, and consists in a simple fold of linen moistened in cold water being applied to the eye. The patient is also to be put in a dark apartment, and narrowly watched, in order to see if inflammation supervenes; very frequently none arises.

PHYSIOLOGICAL EXPERIMENT.

The following curious experiment has been lately tried by Dr. Blundell, lecturer on midwifery at Guy's Hospital. This gentleman opened the common carotid of a dog, and allowed the artery to bleed till the animal appeared dead; when Dr. B. immediately injected into the jugular vein, the blood that had been drawn off, which had the effect of resuscitating the dog. From the result of this experiment, Dr. B. infers

that when the vital powers appear to be extinguished in a woman during parturition from uterine hemorrhage, there is a chance of restoring animation by the immediate injection of blood into the jugular vein. Whether the blood to be injected is that of the patient herself, or of some animal which is to be killed for the purpose, we are not exactly certain, but we believe the former.

ST. THOMAS'S HOSPITAL.

Case of Fracture of the Skull, with slight Depression.

George Morris, æt. fifteen, was admitted into Jacob's ward of this hospital, Feb. 12th, 1824, at four p. m. His parents state that about eleven in the morning, he was found on the ground in a field, quite senseless, and was supposed to have been thrown from a horse, and kicked by that animal, as he had been seen riding a short time before the accident happened. He was bled by a surgeon previous to his admission, which, it is stated, afforded him some relief.

Four, p. m.—Lies on his side, nearly in a state of insensibility; when spoken to, he makes no reply; but when roused, and raised up in the bed, he answers any question, but knows nothing about the accident, or his being brought to the hospital.—Feels sick—and an effort at vomiting always comes on when he is moved. Pupils not dilated, and when exposed to the light contract readily;—breathing stertorous; pulse 96, and small.

About half an inch above the right ear, there is a wound of a semilunar shape, two inches and a half in extent, situated perpendicularly with the concavity turned towards the back of the head. The edges of the wound are clean, but the bone beneath may be seen denuded of its periosteum; and on introducing the finger into the wound, a fracture may be distinctly felt.

Under these circumstances, he was ordered by Mr. Travers to be carried into the operating theatre, for the purpose of enlarging the wound and ascertaining the extent of the fracture. An incision was made in an oblique direction, crossing the other, by which means four angular flaps were formed. These were turned back, and a fracture was found nearly of the same size as the original wound, and the bone appeared a little depressed. On examination, however, the injury was found to be confined to the outer table. The elevator was employed to raise a piece of bone in the central part of the fracture. After this was done the edges of the wound were brought together, and over these were put some strips of adhesive plaster. Just before the operation the boy's pulse was 108, and fuller than at four o'clock,—after the operation the pulse became quicker, 120, but smaller. In removing him from the warp to the theatre, the bandage

slipped from the orifice of the vein which had been opened in the morning, and some ounces of blood were lost.

Feb. 13th.—A saline effervescing draught, with a little sulphate of magnesia, was given him last evening. Passed a restless night, and this morning the pulse became hard and incompressible, and ten ounces of blood were taken from the arm, after which the pulse became more free and expanded.

Two, p. m.—Pulse 114, full. Tongue whitish brown—Thirsty—Skin hot—Pupils dilated a little—Complains of pain in both sides of the head—Right side of the face very much flushed—Has not felt sick at the stomach since the morning—Voided his urine once since his admission, and that immediately after the bleeding.

Blood slightly inflamed and cupped.

Feb. 14th.—Passed a pretty good night—Took five grains of calomel last evening, and after that a common enema was administered, which procured him two good motions—Redness of the right side of the face less—Pain in the head diminished, and the patient appears quite relieved. Tongue white, edges red—Thirsty—Pulse 60, full—Took some bread and milk this morning, which is the only sustenance he has taken since the accident.

Feb. 15th, 3, p. m.—Passed a good night—Bowels not open since yesterday—Pulse 76, full—Slight pain, on pressure, in the left hypochondriac region—Wound dressed this morning, united in some parts—Poultice applied to it on account of slight swelling in that part—Has taken five grains of extract of colocynth, and three of calomel.

Feb. 16th.—Feels much better—Bowels open twice last night, and twice this morning.

Feb. 17th.—Continues better—Wound looks healthy—The incision that was made in order to expose the wound is nearly healed—The one inflicted by the horse is not united—A thin discharge comes from the part.

Feb. 21st.—The boy is going on well, and in a fair way of recovery.

The following clinical observations, in reference to the above case, were delivered by Mr. Travers, in the operating theatre:—

"Gentlemen:—This case does not furnish much matter for comment. All injuries of the head, however, in a surgical point of view, are of great importance, and it is scarcely possible that any case of the kind can happen without proving of more or less value to the practical surgeon.

"When this boy was first seen, the symptoms were of a mixed kind, that is, they denoted the combined injuries of compression and concussion; this is by no means uncommon, indeed in injuries of the head the symptoms of concussion and compression are much more frequently blended than otherwise. Authors, it is true,

in treating of these affections, have laid down precise extremes of appearances, and symptoms marking the two injuries as totally distinct, describing the symptoms with peculiar nicety, as applicable to each. With me, however, it is a question whether, in either case, the symptoms are ever so pure and simple as have been described. They are always, in my opinion, more or less intermixed. I never saw a case of concussion that did not present some of the symptoms characteristic of compression, and *vice versâ*. In the instance before us the pupils were not extremely dilated. He was sensible if spoken to sharply, and would answer any question put to him. He appeared, however, to speak with reluctance, and seemed desirous to remain undisturbed. He ejected his food, and this symptom belongs to concussion as well as to compression; it is quite as common with the one as with the other. While they were carrying this lad from the ward up the stairs, to the operating theatre, the bandage slipped from his arm, where he had been bled, and he lost in consequence a considerable quantity of blood before it was discovered, probably twelve ounces. This circumstance unquestionably proved of great service to him, as the coma immediately became sensibly less, and he was perfectly conscious of all that was passing. I believe the further loss of blood occasioned by the division of the scalp had a beneficial effect. I may here remark, that I have several times been called to persons suffering under similar injuries, in whom I have found coma existing to a great degree, accompanied with considerable tumours under the scalp. These tumours have a delusive feel; this, however, is not of much consequence, as there can be no difficulty in determining the proper course to be pursued in such cases. You must make incisions into the scalp, covering these swellings, which will often be followed by considerable discharges of blood, and likewise by an instantaneous remission of the comatose symptoms. This fact may be thus explained—a fissure occurs in the bone—some of the blood vessels become lacerated, the blood escapes, collects under the tendon of the occipito-frontalis, passes through the fracture, presses upon the dura mater, and coma is produced; you make an opening in the scalp, the blood is discharged, pressure upon the dura mater is thereby taken off, and the coma disappears. In all cases of injuries of the head, where the symptoms of compression come on immediately, it is right to ascertain by a careful examination of the wounded part, the extent of the injury. Should there be an opening in the scalp, if necessary, it must be enlarged, and if the scalp which covers

the fracture remain entire, it should be divided, for the purpose of discovering the character of the injury. This practice has been objected to by some surgeons; but it is folly to reason against a method of treatment which may be productive of the best possible consequences, and which, at the same time, can never give rise to the slightest hazard or inconvenience to the patient. You dilate the wound in one case, and make an opening through the scalp in the other. As I have just stated, when the symptoms of compression are caused by the blood collecting under the occipito-frontalis, then passing through the fissure, occasioning pressure upon the dura mater, an incision into the scalp, by allowing the blood to escape, will often be speedily followed by the absence of every symptom of coma. On the other hand, if the fracture be confined to the external table of the cranium, still the loss of blood occasioned by the incision will prove of service, as a preventive of inflammation. After the division in such cases, nothing more than simple medical treatment will be requisite, as in the instance of this boy. When I saw him on the following day, still having the symptoms which have been detailed to you in the report of the case, and being satisfied that nothing more could be done for him in the operating way, I ordered the purgative medicine, and cathartic clyster, for the purpose of restoring the secretions, upon the reproduction of which, the unfavourable symptoms immediately vanished. The purgative, therefore, was attended with the best possible effects.

When you cut down upon the cranium, in cases of compression, for the purpose of ascertaining the extent of fracture, you should divide the scalp for a quarter or half an inch beyond the fracture; for it often happens that the fissure will cease to be observable for a short distance when, upon tracing a little farther, you suddenly burst upon another fracture, much worse than the one to which your attention was at first directed. Sometimes fractures of the cranium are so extensive, that if all the loose pieces of bone were to be removed, half the brain would be exposed. In many fractures of the head, accompanied with depression, there will be no necessity to apply the trephine, as by making a fulcrum of the sound bone you can raise the depressed portion by means of the elevator. This practice is now adopted by the best surgeons, and the trephine is not at present employed more frequently than as one to twenty as compared with the practice of our ancestors. Some surgeons of eminence in this town, in cases of fracture with depressed bone, recommend the operation of elevation to be delayed, unless the symptoms of compression are

very urgent, and require its immediate adoption. This I consider a very fatal error, and strongly advise you to avoid it. I hold it right in all cases of fracture of the cranium, where symptoms of pressure are present, that the causes of such pressure should be immediately removed.—Trepan one person directly after the injury, and in another delay the operation three days—which of the two has the best chance of recovery—which is the least liable to danger? Why, unquestionably, the first, for in this case there is an absence of inflammation, while in the other you defer the operation until it has occurred. I consider the danger chiefly to arise from the proneness to meningeal inflammation, arising from the irritation produced by the depressed bone. Therefore, I say, when pressure upon the dura mater exists, the patient has no chance, at least no fair chance of recovery, if you delay the operation so as to allow inflammation of the membranes to come on. In cases, then, of fracture of the skull, accompanied with symptoms of compression, operate, *sur le champ*, whereby you make the operation and injury one. I remember two parallel cases in Guy's, which were treated according to the two modes I have been speaking of, a more complete parallel in point of age, symptoms, and injury, could not have been met with; one of these patients was operated on immediately after the accident; in the other the operation was postponed to the fifth day; the first patient did extremely well, and recovered without an unfavourable symptom; the second died at the end of thirty-six hours after the operation. I deem it unnecessary to say more to you on this subject.

FOREIGN DEPARTMENT.

Royal Institute of France.

At a late sitting of this body, M. Flourens read a paper, entitled *Physical Researches concerning the precise or specific Action of certain Substances on certain Parts of the Brain.*

It is known that certain substances introduced into the alimentary canal or arterial system principally, or rather *specifically*, act on the brain. But it has not yet been satisfactorily explained how these substances, acting all on the same organ, nevertheless do all produce phenomena essentially different.

M. Flourens, whose former experiments tend to establish, that the brain is composed of several parts materially different in their functions, entertained the idea of ascertaining, by direct experiments, the cause of this singular diversity of which we have been speaking, in the proper or specific action of each of these substances on each of the different parts of the brain.

From the new experiments of M. Flourens it appears—

1. That, up to a given dose, opium acts exclusively on the lobes of the *cerebrum;* belladonna on the *corpora quadrigemina;* and alcohol on the *cerebellum.*

2. That the physical results of the action of each of these substances on these different parts are absolutely the same as those from mechanical injury of these parts. Thus, for instance, when a substance acts only on the lobes of the *cerebrum*, the functions of those lobes alone are impaired; when on the *cerebellum merely*, those of this organ are deranged, and so on.

3. That the action of each substance always leaves after death, and points out even during life, marks which may enable one to distinguish the affected organ from the others.

4. That camphor and æthers, &c., act in the same way as alcohol; the watery extracts of henbane and bitter lettuce in a manner analogous to that of opium.

This paper has been transmitted to a committee composed of MM. Cuvier, Humboldt, Portal, and Dumeril, before whom the experiments have been already repeated; and for whose report, which cannot be a long time ere it is made to the academy, we shall wait, in order to give farther details to our readers.—*Revue Médicale, Jan.* 1824.

Efficacy of the Sulphate of Quinine in Ague.

Dr. Michaelis, of Berlin, has recently had an opportunity of trying the efficacy of this new medicine, in a great number of cases of intermittent fever, which has chiefly attacked children in a particular district. He has given it in doses of three grains to children, during the remission, with the greatest success,—this quantity being sufficient to prevent a return of the fever.—*Journal der Chirurgie, von Gräfe und Walter.*

Use of the Tincture of Tobacco in Ischuria.

Professor Westberg, of Halmstad, in Sweden, has recently employed the Tinctura Nicotianæ, in cases of retention of urine, with great benefit to the patients. He gives twenty drops of the tincture in a cup of linseed-tea every hour; and has generally found the second or third dose operate so as to relieve the patient. He has found it extremely beneficial in the acute stage of gonorrhœa, when there is much difficulty and pain in passing the urine. —*Svenka Lakare Sallskapets Handlinger.*

Royal Academy of Medicine at Paris.

M. Jules Cloquet lately presented to this Academy a curious specimen of pathological anatomy; it was an an-

chylosis of the second cervical vertebra with the occiput. This specimen was taken from a woman of thirty-eight years of age, who had been attacked six or seven years before her death with a severe rheumatic affection of the neck, in consequence of which she felt a great stiffness down the cervical vertebræ, with a falling of the head backwards, and incapability of rotating that part. The patient died of an affection of the chest. This specimen shews that all the anterior part of the atlas had been destroyed, so that the second had ascended above it, and united with the occiput. The *processus dentatus* had entered the *foramen magnum*, the diameter of which it had contracted. The origin of the spinal marrow was strongly compressed; yet the patient only had some obscure symptoms of derangement of the nervous system.—*Archives Générales de Médecine, Jan.*

LECTURE XXXVI.

In the last Lecture I spoke of the nature and symptoms of cataract; I mentioned to you that there were three operations for the cure of the disease,—namely, depression, extraction, and that for procuring solution of the cataract; and I then described to you the operation for depression. In this evening's Lecture I shall proceed, in the first place, to describe the operation for extraction of the cataract.

This operation was first performed towards the end of the seventeenth century; it was not, however, generally known till somewhat later, when it was brought into repute by Deville, who published the method of performing it. Considerable improvements were subsequently made in the mode of performing it by Wenzel, who practised it with great dexterity, and astonishing success. There seems to be no necessity for preparing a patient for this operation, beyond taking care that his bowels be duly evacuated, and that he has not used any unusually stimulating diet previous to the operation. It would be highly improper to perform it, if the patient was at the time labouring under any other complaint or morbid affection; means should be taken to remove any complaint of this kind before the operation is attempted.—Beyond these precautions, however, no preparatory treatment will be necessary, though I am aware, that much stress was formerly laid upon this point. Several instruments will be required for

the performance of this operation, which is a more complicated one than that to which I before directed your attention. In the first place a cornea knife will be necessary; the knife used by Wenzel was something like a bleeding lancet; the blade, however, was neither so long nor so broad, and the edges were straight. Ware's knife was an improvement on Wenzel's; it is much less spear-pointed; the edges are straight as in Wenzel's, but while the lower edge is cutting, the superior edge is only cutting towards the point. From the point towards the handle there was a gradual increase in the size of the knife, a circumstance upon which Ware particularly insisted, in order that the knife, on being carried onwards, might always follow up the opening, so as to prevent the escape of the aqueous humour. Wenzel's knife, however, and Ware's improvement upon it, are greatly inferior to the knife contrived by Beer, the celebrated oculist of Vienna. —This knife, as you will observe, is very different in shape, (the learned gentleman exhibited the different instruments to the class;) the upper edge is quite straight, while the lower edge is made straight and oblique; the whole of the lower edge is cutting; the upper edge is cutting towards the point, and the size is accurately increased from the point towards the handle, so as to fill up the opening, and prevent the escape of the aqueous humour. Beer's knife is preferable to either of the others, because there is a much greater extent of cutting surface, so that the section of the cornea is completed in a shorter time and in a safer manner; it is, besides, capable of being made with much greater accuracy. A speculum was sometimes used in this operation, but it is not at all necessary; in fact, all specula are objectionable, as they are likely to produce undue pressure on the globe of the eye. The next instrument is a pair of curved scissors, in order to enlarge the opening made into the cornea, if it should not be of sufficient size to extract the cataract. A minute curved needle will be required, in order to scratch the capsule of the crystalline lens; a curette, or scoop, to remove any opaque fragments of the lens, and a pair of minute forceps, of which the best construction is that recommended by Beer, to extract any portions of opaque membrane from the capsule of the lens. These are the principal

instruments required in this operation. Let us next consider the mode of performing it. The position of the patient should be nearly the same as that in the operation for couching; he should be placed opposite a window, so as to admit a full, clear, but not too vivid light. It should not be a reflecting light, so that if the sun should happen to shine, a north window should be chosen; the inner side of the eye towards the nose, where the point of the knife is to be carried through, should be well brightened. The patient should be seated in a low chair with a high back, his head resting against it, or firmly supported against the chest of an assistant. The operator should place himself behind the patient in a chair of sufficient height to enable him to plant his foot conveniently on a stool, and resting his elbow on the knee opposite to the eye to be operated upon, bring his hand towards it. The assistant should then place his hand behind the patient's head, and with the extremity of his fore-finger gently raise up the lid without making pressure on the globe. The operator then takes the knife in his right hand, if it be the left eye which is to be operated upon, and in his left, if it be the right eye, in the same way as he would take a pencil between his fore-fingers and thumb, resting his little finger upon the malar bone.

The first thing which the operator then does is, to make what is called the punctuation of the cornea. He introduces the point of the instrument at the distance of half a line from the anterior junction of the cornea with the sclerotic coat, and passes it in a direction nearly parallel to the iris, and before it with a little obliquity, through the anterior chamber to the opposite or nasal side. In making the section of the cornea, the knife should be carried onwards, without any downward motion; and as soon as the section is completed, the lid should be allowed to drop over the fore part of the eye, to prevent the escape of a portion of vitreous humour, if there should be any spasm of the part, or any unsteady motion of the patient. The operator waits till the eye is quiet, and then introduces the curved needle with a convexity under the flap of the cornea; and turning the point towards the fore part of the capsule, moves it upwards, and downwards, and laterally from side to side, making a sort of crucial incision. He then squeezes out the

cataract, by making gentle pressure on the globe above and below, until the lens is lifted from its bed, and passes through the opening of the cornea upon the cheek of the patient. All that then remains to be done is to examine whether there are any opaque fragments of the lens left; if there are, they must be scooped out by the curette; if not, the upper lid is to be rubbed over the surface of the cornea. If there is any portion of opaque membrane remaining, it must be removed by the forceps, and in this way the operation will be completed. (The learned gentleman proceeded to perform the operation exactly in the manner above described, on the sheep's eye; which, he observed, was better adapted for this purpose than the human eye, on account of its being larger and less flaccid.)

Many untoward circumstances, however, frequently interfere with the success of this operation. In the first place, the section of the cornea may be too small; in which case you will either be unable to dislodge the cataract, or so much force will be required for that purpose as is likely to produce serious inflammation, and such a degree of disorganization as will destroy vision. The section through the cornea should be about nine-sixteenths of a line, or one-sixteenth more than half a line from its junction with the sclerotica; the point of the instrument is introduced a little below the transverse diameter of the eye, on one side, and should come out a little above it on the other. If you find, when you have completed the section of the cornea, that the opening is not sufficiently large, do not hesitate to use the scissors, in order to make it large enough to admit the passage of the cataract. The second untoward circumstance to which I shall advert is, the premature escape of the aqueous humour, either from the unsteadiness of the operator, or from some defect in the knife. On the escape of the aqueous humour, the iris loses its support and becomes prolapsed. When this happens, the way of preventing any mischief will be, not to continue the incision, but to rub the cornea with the point of your finger, by which the prolapsed iris will be stimulated to contract; and on this being removed out of the way, you may complete the incision. This is the expedient recommended by Wenzel and Ware, and it answers the purpose ex-

tremely well. The third unfortunate circumstance which sometimes occurs is the loss of a portion of the vitreous humour, arising from some undue pressure on the globe of the eye by the operator or assistant, or from some spasm of the muscles of the eye, though the last cause seldom happens. Another way in which this accident sometimes occurs, is when the needle is injudiciously used too near the circumference of the lens, and the capsule of the vitreous humour is torn through; so that when you make pressure on the globe, instead of the cataract coming forward, a large portion of vitreous humour is protruded. In this case, you should not attempt to force out the cataract; but you should endeavour to entangle it as much as possible, so as to prevent the escape of the vitreous humour. The loss of the vitreous humour is sometimes occasioned by the use of the curette, in consequence of the instrument passing through the back layer of the capsule. The curette should never be used when the pupil is at all obscured; the field of the pupil should be perfectly distinct when you resort to that instrument. The loss of a small portion of vitreous humour does not essentially interfere with the success of the operation; indeed, it has been said, and perhaps justly, that the loss of a small portion is rather beneficial than otherwise. It would be an extremely dangerous experiment, however, to endeavour to force out only a certain quantity. The loss of a portion of this humour should not prevent you from completing the operation in the best possible way, by removing all the loose fragments of the opaque lens, and the different portions of opaque membrane or capsule. Another unfortunate circumstance which sometimes happens, is the introduction of the cornea knife between the lamellæ of the cornea; the consequence of which will be, that the section of the cornea will be very small and imperfect. There are various other circumstances which may interfere with the success of this operation, which I shall not detain you by mentioning. Dexterity in performing it can only be acquired by practice. I do not agree with Wenzel, that you must poke out a hatful of eyes before you can hope to perform this operation with success; but, undoubtedly, considerable practice is necessary to enable you to acquire dexterity in performing it. Whenever any unfortunate

circumstance happens, you should be perfectly calm, cool, and deliberate: close the eyelid; consider what is best to be done; and having made up your mind on that point, proceed with firmness and decision in the operation. With respect to the after-treatment, your object will be, as far as possible, to prevent inflammation. A compress of fine linen or cambric, kept wet with cold water, should be applied to the eyes, or rather to the eye opposite that which has been operated upon; it should be fixed by means of a bandage, carried round from the occiput, crossed in front, and pinned on the sides of the night-cap. The patient should be carried to bed after the operation; placed in the recumbent posture, with his head a little elevated, and the room should be darkened. He should be allowed nothing but barley-water, tea, or water-gruel, for the first few days; and if there should be any symptoms of inflammation, such as pain, a sensation as if there were some external body in the eye, accompanied with quickness of pulse, a quantity of blood should be immediately taken away from the arm. It will be better not to disturb the bandage, or raise the lid to examine the eye, for at least three days, unless the patient should feel any considerable pain or irritation; for in that case it would be advisable to ascertain the cause by examining the eye. The patient should be kept in bed in the recumbent posture for five days, and not even be suffered to rise for the evacuation of his fæces. A bed-pan should be used for that purpose. At the end of that time, he may get up to have his bed made. The best way of preventing irritation is carefully to avoid making any undue pressure on the globe of the eye. Great care must be taken, in adjusting the bandage, not to depress the lower lid, by which means the section of the cornea may be brought over, and the adaptation of the cut edges prevented. Loose eye-lashes are sometimes a source of irritation, and it will be right to examine whether there are any such before the operation; if there should be any tendency to inversion of the lid, you may prevent the lid from rubbing against the surface of the globe by means of a bit of adhesive plaster fastened to the cheek. I have already stated that I do not advise you to operate if one eye is sound; nor do I think it right, if there should be a cataract in each

eye, to operate on both at once, unless the patient should particularly desire it.

Of the Operation for Procuring Solution of the Cataract.

The third operation is that for procuring solution of the cataract, which, as it is particularly adapted to the cataracts of children, leads me to make some observations in this place on congenital cataract. Children are not unfrequently either born with cataract, or with a disposition to cataract, which speedily makes its appearance. Indeed it is not common to find an absolute opacity of the lens, or of the capsule containing it, at the birth of the child; the cataract usually makes its appearance within a few months, or at least within the first few years, from the birth of the child. In some instances there seems an hereditary predisposition to this disease, several children in the same family being affected with it. The nature of the cataract may be firm, soft, or fluid; and it may be lenticular or capsular, as in the adult. By far the most common form, however, according to Dr. Saunders, who has given particular attention to cataract in children, is the capsular. In general, he found the lens itself more or less absorbed, the anterior and posterior layers of the capsule being opaque and adhering. The appearance of the cataract is somewhat different from that in the adult; there is an opaque nucleus either at the centre or some part of the circumference, and the rest has an unequal opacity, or streaked reticulated appearance. (Here Mr. GREEN exhibited two drawings illustrating this unequal opacity, which he had copied from Dr. Saunders's work on the eye.) Another circumstance peculiar to congenital cataract is the unsteadiness and constant motion of the eye, which it is not difficult to explain. The eye has never been accustomed to have its vision fixed by objects, unless, perhaps, very imperfectly, and consequently the will has never been in the habit of influencing the muscles which give direction to the globe of the eye. Hence the unsteady and constant motion of the globe of the eye. It was formerly deemed advisable to defer the operation for cataract in children, but Dr. Saunders has introduced a mode of operating in these cases which may be resorted to at any age. This is certainly one of the greatest improvements which has been made in this branch

of surgery, not only because vision is extremely important for the purposes of education, but because, if the operation be delayed, a very considerable time will elapse before the patient can acquire a command over the eye, in consequence of the want of voluntary influence over the muscles. Another, and a more forcible reason, why this operation should not be delayed, is, that it is an universal law in the economy of nature, that all parts which are not exercised lose more or less of power; and, consequently, the retina, from not being accustomed to receive the impressions of light, loses a considerable portion of its power. Dr. Saunders found, that in many cases where this operation had been delayed, the patients retained no more power of vision than was sufficient to enable them to distinguish between light and darkness. The operation may in general be performed with a hope of success, between the age of eighteen months and four years. Dr. Saunders's mode of operating is not confined to the cataracts of children; it may be employed also in the cataracts of adults, provided they are fluid, soft, or membranous cataracts.

I do not mean to say that this operation is entirely new; if you read Mr. Pott's works, you will find that, in some instances, he performed a very similar operation. He tells you, that in cases where the cataract was too soft for depression, he sometimes lacerated the anterior layers of the capsule, so as to admit the aqueous humour, and procure the solution of the cataract. Hey, Scarpa, and Ware, have performed similar operations. We are not, however, to consider those as the inventors of any practice who have merely employed it here and there, without stating any certain rules for its general applicability. It is to Dr. Saunders that we are indebted for having shewn the principle on which he performed this particular operation, its applicability to cataract in children, and to some cases of cataract in adults. Dr. Saunders, therefore, may be justly considered as the inventor of this operation, and is entitled to our respect and admiration for the introduction of so material an improvement in this branch of surgery. The operation is very simple; it consists merely in making an opening in the anterior layer of the capsule of the lens, breaking up more or less the texture of the cata-

ract, and admitting the aqueous humour in which the cataract is dissolved, and by this means absorbed. It may be more properly called an operation for the absorption, than for the solution of the cataract, since absorption is the ultimate object of it. The instrument required is a needle, very similar to that employed in the operation for couching; the point, however, is somewhat different; its shoulders are made cutting. It will be right, before the operation, to use belladonna for the purpose of dilating the pupil, so that the cataract may be distinctly seen. A small quantity of the extract of belladonna, softened to the consistence of cream, may be introduced into the eye, or smeared round the lids. In operating on the adult, the patient should be placed in the same position as in the operation for couching; children are better placed in the recumbent posture, with the head fixed on a pillow. Sometimes a speculum is required to steady the eye; Pellier's speculum is the best for this purpose. The needle may be introduced either in the same way as in the operation for couching, or else through the cornea. In the latter case there are two modes of operating, called the anterior and the posterior. In the former, the needle is introduced at the distance of half a line from the junction of the cornea with the sclerotica, carried parallel to the iris, and turned inwards so as to break up a portion of the capsule of the lens. In the posterior operation, the needle is carried through the posterior chamber, a little behind the iris, and the texture of the capsule is broken up in the same way, so as to admit the aqueous humour. If the cataract be fluid, it immediately mixes with the aqueous humour, and you will have no more trouble. As to the after treatment, your object must be, as in the former cases, to prevent inflammation. It is better in this operation not to attempt to do too much at once; but rather to repeat it frequently, than to break up the texture too extensively at once.

Having described these different operations, it may be necessary to consider which of them it may be most expedient to adopt. It seems to me that in those cases which admit of the operation for solution, namely, fluid, soft, and most cases of membranous cataract, that operation is greatly preferable to any other. Soft, fluid, and membranous cata-

facts cannot be depressed. It is true that the operation for extraction might be performed, but it is to be considered that the operation for solution is much more easy, and that it does very little injury to the eye. In firm cataracts, where it is a matter of indifference whether the operation for depression or extraction should be performed, that for extraction, supposing it to be equally well performed, is undoubtedly preferable, because the disease is entirely removed by it. It is not always, however, a matter of indifference, for there are many cases in which it would be extremely imprudent to attempt the operation for extraction, as, for instance, in cases of adhesion of the iris to the cornea, or where the cornea is very flat, and the anterior chamber necessarily small, or in cases of contraction of the pupil, myosis, or arcus senilis. There are some cases in which the unsteadiness of the eye is so great, either from spasmodic motions to which the patient is subject, or, lastly, where there is such indocility in the patient, either from invincible fear or stupidity, that it will not be advisable to attempt the operation. I am led to these remarks, in consequence of my having operated in this hospital on a woman who had cataract in both eyes. When the operation was proposed to her she immediately consented, and supposing that she would have sufficient resolution to go through it, I sat down with perfect confidence to perform the operation for extraction. She no sooner, however, felt the pain,—pain it can scarcely be called,—the uneasiness, rather, arising from the application of the instrument, than she could not keep her head at all steady, but threw herself into all sorts of postures. I succeeded, with great difficulty, in making a very indifferent section of the cornea, and in extracting the cataract from the eye. I know not what induced me to be so indiscreet, after the specimen I had had of this patient's firmness, to attempt the operation on the other eye. I did so, however, and if the patient was unsteady during the first operation, she was ten times more so during the second. The consequence was, that though I completed the section of the cornea in the second, I found I could not proceed without the risk of doing considerable injury to the part; and I thought it best to leave the cataract in its place.

Where there are no contra-indications to deter us from performing the operation for extraction, it is undoubtedly the most effectual operation, as it completely removes the disease; but then it requires much more skill and dexterity than the operation of depression; and the want of sufficient skill is more likely to prove injurious to the patient. The operation for depression is extremely easy, but it has its disadvantages. Not unfrequently, the cataract rises again, and it will be necessary to repeat the operation. If the cataract be depressed on the retina, the patient will experience constant pain, which sometimes terminates in amaurosis. It sometimes happens after the operation for couching, that the patient is seized with vomiting, accompanied with acute pain. This has been supposed to be the consequence of wounding the ciliary nerves. I know not whether this opinion is well founded, but it commonly happens when the operation is followed by vomiting, that the cataract rises again. No judicious surgeon will, indiscriminately, prefer one mode of operation to another; his opinion must be decided by the nature of each particular case. In general, where the nature of the cataract admits of it, the operation for solution is preferable. In cases where the operation for extraction is not contra-indicated it will be preferable to that for depression, if the surgeon has had sufficient opportunities of acquiring dexterity; but if he has not been much in the habit of performing the operation, I should recommend as the safer, though less effectual course, the operation for depression.

I shall trespass a little longer on your attention, by describing the operation for artificial pupil, as the following lecture would otherwise be too long.

Mr. GREEN proceeded to state, that where, from some defect of the cornea or iris, or the parts connected with them, there was no passage for the rays of light, the operation for artificial pupil was required, which consisted in making a section with a cutting needle, through the iris, which by the elasticity of its fibres, separated the edges, and thus made a passage for the rays of light. Cheselden was the first surgeon who performed it. There are three modes of performing the operation:—1st, by a simple incision of the iris, technically called *corotomia;* 2dly, where

a portion of the iris is cut away, which operation is called *corectomia*; 3dly, where the iris is turned away from its attachment to the ciliary ligament, which is called *coredialysis*. The simple incision of the iris was seldom resorted to; the operation of excision of a part of the iris was recommended by Mr. Gibson, and was certainly the best when the case admitted of it.—Mr. Gibson's mode of performing it was to make an incision with a knife, as near as possible to the iris, and then making gentle pressure on the globe of the eye, so as to protrude the iris, to snip off a portion of it with a pair of scissors. If the iris was adherent, so that it could not be protruded, he hooked it forward with a little hook, and then snipped away a portion with the scissors. The operation of separating a part of the iris from its attachment to the ciliary ligament may be performed with Scarpa's needle. The needle should be introduced on the outer side through the cornea, at the distance of two lines from its junction with the scelerotica, and carried across the anterior chamber parallel to the plane of the iris. The point is then to be directed through the iris, towards the inner side, and then carrying it backwards and outwards, the iris is to be detached from the ciliary ligament. The excision of a portion of the iris was the preferable operation, but where the case did not admit of it, the detachment of the iris from the ciliary ligament was the next best operation. It was impossible to lay down general rules for these operations in a lecture, for the cases were so infinitely varied that much must, after all, be left to the discretion of the surgeon, who should adapt the nature of the operation to the circumstances of each particular case.

LECTURE XXXVII.

Wednesday Evening, Feb. 25th.

In the last lecture, Gentlemen, I spoke to you of the operation for extraction of the cataract; of congenital cataract, and the operation it required; of the operation of solution, and of that for artificial pupil; it only remains for me now to treat of those diseases of the globe of the eye which require extirpation, and are of a malignant kind.

Fungus Hæmatodes of the Eye. The first disease to which I shall call your attention is the fungus hæmatodes of the eye,

malignant fungus, or, as it is called by some, medullary sarcoma, a disease which soon proves fatal unless an operation be early performed, and even then the chance of success is extremely doubtful. No age appears exempt from this complaint, but it more frequently attacks the young; and a large proportion of the cases occurs before twelve years of age.

Symptoms of Fungus Hæmatodes of the Eye.

The first circumstance which attracts the notice of the patient is the vision becoming impaired. On looking into the eye at the commencement of this complaint, you see opposite to the pupil, and deeply seated, an appearance like a mirror, resembling an opacity of the lens, from which it is difficult to distinguish it. If you watch the progress of this disease, you will see that this appearance enlarges into a prominence, proceeding from the bottom of the eye towards the cornea, and as it reaches the lens, you must be the more on your guard that you do not mistake it for cataract. There is one appearance, however, at this stage by which you can distinguish the one from the other: upon the opaque substance, or the retina, of which its covering consists, branches of the arteria centralis retinæ may be seen ramifying. The other symptoms are loss of vision, and the iris remaining immoveable. As the prominence enlarges, the iris becomes protruded, and the cornea distended. The conjunctiva becomes inflamed, the eye-lids vascular, and in a diseased state; and in process of time the cornea sloughs, an opening is formed, and a discharge of a ropy mucus first takes place.

The fungus does not always protrude through the cornea, but sometimes through the sclerotic, and then it has a purple livid hue, and is covered by the conjunctiva. When the fungus increases in size, it assumes a dark red colour, its surface is unequal, and irregular; it bleeds at the slightest touch; the parts slough, and then there is a fetid sanious discharge. During the progress of the complaint, the health becomes affected, the countenance puts on a sallow hue, and the patient wastes in flesh. This disease is accompanied, and generally preceded, by disorder of the digestive organs; the appetite is impaired; and there are present all the other marks of

derangement of the general health. When the strength and health are broken up, the disease very soon comes to a termination. The close of the disease is preceded by hectic fever; as is that of most complaints from which the general health has suffered much during their progress. In fungus of the eye, the rest is completely destroyed,—there is an affection of the nervous system; and in children, convulsions come on, which terminate their existence. In all stages of the disease, there is a tendency to them, and they generally prove destructive to life.

If you examine the appearances of the eye, you will find little difference in them from those of fungus in any other part. There is a grumous appearance on the surface, and the fungus bears a striking resemblance to the medullary matter of the brain; not unlike cream to the sight. The appearances, however, vary in different forms of the complaint. No one texture of the eye is free from it. It frequently commences from the optic nerve, extends to the retina, sclerotic and choroid coats; but, on examining a fungus of the eye, it would be difficult to say where it began; the disorganization is so complete—the retina is destroyed—the humours are absorbed—the choroid protrudes, and very little of the natural texture is left.—(*Here the learned gentleman exhibited to the class specimens, which shewed the different appearances in the different forms of the disease.*)—In the case from which one specimen was taken, Mr. H. Cline extirpated the eye;—the patient was a Portuguese. The greater part of the anterior chamber is filled with a dark substance, like the pigmentum nigrum. In this man, however, the disease returned. In some instances, you will find the disease extending along the optic nerve, which enlarges, becomes altered in texture—of a brown colour—and reaches the brain, which will also be affected by the disease. The only remedy in this disease, is the extirpation of the eye, and this in the early stage. In most cases, the operation proves unsuccessful, in consequence of its not being performed sufficiently early, or before there is a disposition in the constitution to reproduce the disease.

There is another disease which requires extirpation of

the eye; therefore, I shall speak of it first, and then describe the operation.

Cancer of the Eye.

By cancer of the eye is meant, not cancer of the globe of the eye, for it rarely or ever commences in it; but it begins in the appendages and conjunctiva, and then extends to the globe of the eye; but I repeat that this disease scarcely ever makes its appearance first in the globe; its common seat is in the conjunctiva. Cancer of the eye at the onset resembles a warty tumour with an ulcer on its surface, which has exactly the same appearances as ulcers in other parts of the body; therefore it will not be necessary for me to describe them; it then extends not only to the globe of the eye, but the palpebral lining, the lachrymal gland, the periosteum of the bones forming the orbit, and the antrum; in fact, the globe, and its appendages, become one entire mass of disease.

No good can be expected in the treatment of this complaint unless the cancer be early removed by the knife. In the progress of the disease the general health becomes broken up.—I shall now proceed to shew you the operation for the removal of the eye.

Extirpation of the Eye.

Although this operation appears formidable, and is so to the patient, as it is a most painful one, yet it is not difficult of execution. The best mode of performing it is as follows:—The patient is to be placed in the sitting posture, or, at any rate, with the head elevated, and in order to steady the eye, or shift its position, if necessary, you are to pass a needle, armed with a ligature, through the fore part of the globe of the eye, by which means you can readily steady it, or move it from one side to the other. If the lids are contracted, or the eye-ball is exceedingly large, it will be necessary to divide the outer angle in order to facilitate the operation. An assistant raises the upper lid, and the operator then introduces a double-edged straight knife through the conjunctiva, and divides the cellular membrane as extensively as he can. He next cuts through the oblique muscles; and having done this, he then divides the recti muscles and the optic nerve; to complete this last step of the operation, a curved knife, adapted

for the purpose, is used, and the globe of the eye is thus easily extracted. It seldom happens that any hæmorrhage takes place which may not be stopped by dossils of lint. The lids are to be brought in apposition,—a compress of linen is to be applied over the eye; inflammation should be guarded against, and the patient should not be neglected; for although inflammation does not frequently supervene after the operation, yet it sometimes comes on, extends to the membranes of the brain, and proves fatal.

Having now concluded the morbid affections of the globe of the eye, I shall proceed to speak of those of its appendages, and first of the eye-lids.

Hordeolum.

One of the most common affections of the eye-lids is that known by the name of *stye*, or *hordeolum*, from its resemblance to a barley-corn. It consists of a small abscess in the lid, and is produced by an obstruction in the follicles of Meibomius—the secretion from the part is altered, becomes inspissated, lodges on the lid, excites irritation, inflammation, and the process of suppuration; lastly, the small abscess breaks, and matter is discharged. In most instances the suppuration is confined to a small space, but in others it puts on the character of a boil, and sloughing of the cellular membrane then takes place. Some persons are more prone to this disease than others; it frequently appears in those who have been subject to disorder of the digestive organs, or in those of a scrofulous habit of body,—and young persons. This morbid affection would be of little consequence in itself, but for the state of the system on which it generally depends. The eye-lids adhere to each other in the mornings, which distresses the patient considerably. There may be excoriation of the lids—redness and thickening of the conjunctiva—excoriation of the skin of the face; lippitudinous ulcers break out; the cilia become altered in their growth, and turned inwards on the globe of the eye; and from these different states a tendency to chronic ophthalmia is kept up. It is necessary when styes are attended with inflammation and redness, that cold applications, poultices, and fomentations should be applied, as in other inflammations; and when matter is formed, that the abscess should be opened with a

lancet. But it more frequently happens that this affection depends upon something wrong in the system, on derangement of the digestive organs, or impaired functions in some part of the body; and then these states must be attended to, for they produce irritation, and sometimes ulceration of the edges of the eye-lids. The best local applications that can be made use of, are those of a mild stimulating nature, the mercurial ointments, with a little of which the edges of the lid should be besmeared every night at bed-time, the parts being previously washed with tepid water. The citrine ointment, (the *unguentum hydrargyri nitratis*) is the one in common use: but it is in its proper state too stimulating for the eyes, therefore it must be diluted with some simple ointment. Both the red and white precipitate mercurial ointments are used, and the zinc ointment also; in fact, it is not essential what kind is employed, if it be mildly stimulating.

Trichiasis.

Another affection of which I shall speak, is that known by the name of *trichiasis*. It is that state of the eye-lashes, in which they become altered in growth, and turned inwards on the globe of the eye, irritating the conjunctiva on every motion of the eye. Some think that this complaintis not owing to the effect of the altered growth of the cilia only, but to a turning in of the lids, called

Entropium.

Entropium, or inversion of the eye-lids, is produced from ulceration of the tarsi, the cicatrices formed by the healing of lippitudinous ulcers which alter the shape of the lids, so that the eye-lashes are turned inwards, irritate the conjunctiva, and produce a continual state of irritation of the whole organ. There is a watering of the eye, together with chronic ophthalmia, and in a short time vessels may be seen shooting over the cornea; nebula and ulceration of the cornea supervene, and thus a serious state of irritation of the transparent part of the eye is produced.—Where the affection is simple trichiasis, the only means that can be relied on, is to pluck away the eye-lashes; some benefit may be derived from applying a piece of adhesive plaster to the lid, which is to be fastened to the cheek, so that the eye-lashes may be kept bent outwards.—The best forceps for removing the eye-lashes is this, (Mr. Green *exhi-*

bited it to the class) one rather broad at the points. But when the lid itself is inverted you must do more, and I believe nothing will be of any use except cutting away a piece of skin from the affected lid; for when this is done, the edges of the wound are brought together by strips of adhesive plaster; a cicatrix is formed, and the eye-lids are then drawn upwards.—The mode of performing the operation is very simple; you must lift a portion of the skin of the affected lid with a pair of forceps that has towards the point transverse branches, and which are grooved as you here see (*holding it up*); with this you lay a firm hold of the portion of the lid, and all you have to do is, to take a pair of curved scissors, and cut off the projecting portion, as near to the edge of the lid as you can. (*The operation was then performed before the class.*) We next come to the opposite state of the lids,

Ectropium.

Ectropium, or eversion of the lids, happens from ulceration on their edges, an altered and vitiated secretion from the follicles of Meibomius, which produce a redness and an altered state of the conjunctiva, and from cicatrices and contractions of the skin of the lids, which tend to evert them. This complaint is very distressing to the patient; the eye has not its natural covering; irritation, from extraneous bodies getting into it, is produced, and thus a constant state of chronic ophthalmia is kept up. Where the disease is brought on by a thickened state of the conjunctiva lining the lid, you must remove that portion; if from a cicatrix, it must be divided; but it will be proper to state that this seldom answers, the divided cicatrix recontracts, and the disease returns. The plan usually adopted consists in removing a triangular portion of the lid, just in the same way as the operation for cancer of the lip is performed; by cutting through a piece of lid which is raised by a pair of forceps, so that the base shall be towards the edge of the lid, and the apex below, at the union of the two sides. A suture is applied through the incision, the edges of the wound are brought together; these united, tend to keep the lid in the natural position; and in fact, the operation, in this way, is often successful.

Now, Gentlemen, I have gone through the various affections of the tunics of the eye, with those of the globe of the eye, and the lids, with the exception of a description of the small tumours, which are often to be met with on them, such as encysted tumours and others. But as these require no particular plan of treatment different from those in other parts of the body, I shall not detain you about them. In their removal, you must bear one thing in mind, viz., the importance of the organ, in the neighbourhood of which they are situated, so that in removing them, you do not injure so delicate a part. The last disease to which I shall call your attention is

Fistula Lachrymalis.

By this term is understood all obstructions of the lachrymal passage preventing the natural flow of the tears and mucus from the eyes to the nose.—The most common cause of this complaint is a closure of one of the puncta, and then there is epiphora, or a watering of the eye, together with suffusion of the tears, and the surgeon consequently discovers that one of the puncta is closed. This must be punctured by a small sharp pin, made of gold or silver, which is to be pushed through it to the lachrymal sac; the obstruction is removed, and the epiphora relieved. When the epiphora continues, the eye becomes irritable, a drooping of the lids comes on, and an altered state of the lachrymal sac is produced. The most important source of this complaint is obstruction of the ductus ad nasum. The original seat, then, is in the duct leading from the lachrymal sac to the nose, and the tears, instead of finding their way to the nose, flow down the cheek; this symptom may, however, arise from a polypus in the nose, and then it will be relieved by the removal of the polypus. One of the symptoms of malignant fungus of the nose is suffusion of tears from pressure in the nasal canal; this disease terminates fatally, and if removed it returns: in this complaint the flow of tears is a very unimportant symptom, compared with the original disease which gives rise to it. But sometimes there is inflammation of the bones of the nose, or periosteum covering them, and the membrane lining the duct, which is thickened, and then the duct becomes more or less

obstructed. It not unfrequently takes place in persons of a scrofulous habit, and those who are subject to affections of the covering of the bones. It is also sometimes a consequence of the abuse of mercury.

Fistula lachrymalis may be divided into three stages:—1st, where there is only simple distension of the lachrymal sac. 2dly, where there are inflammation and suppuration of the sac. And the third stage, is that in which there is a fistulous opening leading from the sac to the cheek.

Simple Distension of the Lachrymal Sac.

The first symptom which leads the patient, in this stage, to observe any thing amiss with the eye, is, that on reading or exposing it to the wind, there is a watering of the eye; in a short time, this becomes constant, and then a swelling appears at the inner corner of the eye, arising from distension of the lachrymal sac, the tears collecting in it. These produce irritation; mucus and purulent matter is secreted; but when the sac protrudes, pressure made on it pushes the tears or mucus either through the puncta, over the face, or down the nose. The complaint sometimes remains in this stage for many years (pressure being occasionally made on the sac to empty it) with only little inconvenience. From the pressure of the distended sac, and obstruction of the nasal duct continuing, or some accidental cause, irritation is excited, and the second stage produced.

Inflammation and suppuration of the Lachrymal Sac.

This affection is attended by a puffiness of the inner corner of the eye, redness of the surrounding skin, which becomes swollen and hard, from the effusion of lymph. Suppuration having commenced in the sac, ulceration comes on, and the matter effects an external opening, by which it is discharged. Now obstruction, inflammation, and suppuration do not always take place in the course of the *ductus ad nasum*, from ordinary causes; but the progress of the complaint, when arising from ordinary and from specific causes, will be different. An opening being thus made in the sac, it is rendered permanent, or kept open, by the flow of pus and tears out of the wound, over the cheek; the disease then arrives at the third stage.

Fistulous opening from the Sac to the Cheek.

In this stage of the complaint, the patient is distressed a good deal by frequent returns of inflammation and suppuration of the sac.

Treatment.

Although various means have been attempted in the cure of this complaint, no plan has been yet laid down that has proved successful; or at least the benefit to be derived from the means and treatment recommended is in most cases very slight. In many cases little need be done but to evacuate the sac for the purpose of preventing irritation; in those cases where there is simple distention of the sac. One cause of this complaint is a vitiated state of the follicles of Meibomius; when matter is secreted, and the eyelids are closed together, and irritation is thus produced in the lachrymal sac—in these cases the lids should be washed with tepid water, and besmeared every night at bed-time, with a little of the unguentum hydrargyri nitratis. By this means, and attending to the constitution, and removing irritation as it arises, the patient may remain in that state for years. When the obstruction is complete, the distention considerable, the attacks of inflammation frequent, and suppuration has commenced, another kind of treatment must be adopted: in this stage the object of your treatment will be to effect a natural passage for the flow of the tears, that is, through the nasal duct, instead of their flowing over the face. Anel is the first who attempted to procure a passage for the matter, and tears into the sac, when the natural one was obstructed; and this he did by introducing a very fine probe through one of the puncta and the lachrymal sac to the *ductus ad nasum*, and thus dilate the stricture; but the instrument was so flexible and thin, that it was ill calculated to overcome the obstruction. My friend, Mr. Travers, who has had most extensive opportunities of watching the progress and trying the effect of different treatments in this disease, recommends the use of an instrument of this kind; it is, however, somewhat different; it is more nail-headed, and not of the same exceeding fineness, being more effectual for removing the obstruction. Anel likewise constructed a small syringe, the mouth of

which was to be introduced into one of the puncta, tepid water was then to be injected through the punctum and sac to the nasal duct; but the injection of fluid was found inadequate to overcome the obstruction. It is a useful instrument in gleety discharges from the sac or duct, but beyond this it is quite inefficient.

Mr. Wathen recommended that a hollow metallic tube should be introduced into the ductus ad nasum; the object of its being hollow was to allow the passage of tears through it, but it was found inadequate; it soon became filled with mucus. M. Dupuytren is in the habit of using a gold tube in this way, and it is said that most of his cases are cured; this I should doubt, and in one case I know it did not succeed. Mr. Pott also advised the use of bougies for removing the obstruction. The plan laid down by Mr. Ware is the one now generally adopted; it consists of introducing a nail-headed style into the ductus ad nasum, and letting it remain there. The style should be just large enough to allow of the flow of the tears by the side of it. If no opening has been made from the repeated inflammation, the mode you will adopt to make one is as follows: you direct the patient to be seated, and then standing behind him, you pass your hand round the patient's head, open the lachrymal sac, and then carry a blunt-pointed bistoury inwards and downwards, and divide the obstruction; the instrument with which you make the external opening is a phymosis knife. Having done this, you ascertain whether the passage is free, and then introduce a nail-headed style, about an inch and three-eighths long; the head of the style is to lay obliquely on the front of the cheek, and a piece of adhesive plaster spread on black silk to be put over it, which will prevent persons from suspecting that there is any thing wrong with the eye. The style requires to be removed once a day, for the first week, and to be washed: sometimes there is little irritation produced by its introduction; but, in general, there is none, and the comfort the patient experiences is very great; the water ceases to flow over the cheek—the sight becomes stronger—the tendency to inflammation is obviated; and, indeed, so much comfort is experienced that the patient is loth to dispense with the use of the style. Although the relief obtained from this plan is great, yet it was in re-

ference to it that I said just now that no plan of treatment had yet been decided on which generally proved successful; for this mode must be considered more in the light of a palliative than a curative remedy; the obstruction frequently returning when the style is removed. It sometimes happens that from disease about the bones of the nose, a fistulous opening from the sac to the nose is formed. If you should operate in such a case, you must introduce a sharp-pointed instrument, either a probe or trocar, through the fore part of the os unguis into the nose, and the only point which remains is to keep open the perforation by a sponge tent, or nail-headed style; but it becomes rarely necessary to perform this operation. I have now, Gentlemen, concluded the subject of diseases of the eye.

MEDICO-CHIRURGICAL SOCIETY.

On Tuesday last a Meeting of this Society was held, at which a valuable communication from M. Breschet, of Paris, was read, containing an account of a fœtus being formed in the *substance* of the uterus. Accompanying the case, there were sent four explanations of this remarkable phenomenon, together with accounts of two or three other cases similar to the one described in M. Breschet's paper. The paper which was remarkable for the care and accuracy with which it had been drawn up, gave rise to an interesting conversation or discussion relating to the present theory of conception, in which the Chairman (Dr. Davis) Dr. Birkbeck, Mr. Alcock, and Mr. Thompson, took a part. The principal point discussed was, that it had never been proved that the contact of the semen with the ovaries was necessary for conception. As the regulation which prohibits members from publishing the Society's proceedings stands unrepealed, we are prevented from giving to the profession much useful and interesting matter; a great part of which will never be published, as it was elicited in the course of the conversation.

Feb. 29th, 1824.

CONTRACTIONS FROM BURNS.

To the Editor of The Lancet.

It would be unbecoming in me to criticise the opinion of one of our most able Surgeons and Anatomical Lecturers, and one so justly looked up to as an highly honourable and candid surgical author, not behind any man in exclaiming on all occasions—"*Fiat justitia ruat cælum.*"

It is impossible to differ from an intelligent correspondent, when he observes that "Sir

Astley is made to say that contraction after extensive burns cannot be prevented; that the surgeon is not blameable who permits such contraction to take place, and that very little or nothing can be effected by art in removing them." Now that very extensive and severe contractions from burns may not only be prevented, but when suffered to take place, may be removed, and their injurious consequences cured, I have only to refer the thousands of readers of *The Lancet* to the seventh vol. of the *Edinburgh Medical and Surgical Journal*, p. 154, where will be found the history of a dreadful case of burnt neck and face, in which the saliva, and the tears of one eye, were continually dripping off; where a complete division of the contracted parts, and the long continued use of a machine, of which an engraving is given, effectually prevented the return of the mischief.

Twenty-three years have elapsed since the division and restoration of the parts took place, and although no power of art could restore a face so injured to a pleasant appearance, yet the two principal objects were completely attained. Two other cases of the same description have occurred here and in the neighbourhood, both of which, on being similarly treated, met with equal success.

The reference to Mr. Earle's observations, published in the Medico-Chirurgical Transactions, is extremely appropriate; this able man, in conjunction with Mr. Brodie, issued to the public, "Remarks on Contractions succeeding Ulcerations of the Skin," in which Mr. Earle says, that the third case recorded was one of contraction from a burn of the neck, and operated upon by Mr. Brodie, doubly interesting from its being *the first of the kind*; from which oversight it appears how readily errors are committed and propagated, even by practitioners, who soar far above the slightest imputation of wilful misrepresentation.

C. G. says, that Mr. E., in the aforesaid paper, ably explains the nature of contractions from burns, and suggests a plan of modifying nature's process in their cure, by a "*new* method of relief, founded on the just laws which regulate the animal economy."

Now, Sir, with respect to the mode of relief in accidents of scorched throat and face, so painfully witnessed in our streets almost every day, sufficient has been already said to shew that there was no just foundation for Mr. E.'s congratulation, or for the observation of the Author of "Dr. Johnson's Review," when, in detailing Mr. E.'s and Mr. B.'s cases, he says, Mr. E. "has established a very useful fact in surgery," simply because it was established before Mr. E. ever proposed the removal of the old cicatrix by dissection, to remove the deformity

and restore the functions of burnt parts.

But may it not be asked, with all due deference, what must have been the consequence of dissecting off all the scorched integuments and subjacent muscular fibres of the whole front of the neck and face? Would such a procedure have been certainly followed by the growth of soft muscular substances and healthy free integuments? — Where skin is burnt, covering bones with but little subjacent muscle, what is to supply the place of the dissected cicatrix?

Experience has confirmed the truth, that complete division of the hardest parts is followed by abatement of rigidity, and ultimately by restoration of nearly healthy texture, care having been taken when operating, to completely liberate all the previously locked up parts; this effected, the muscles connected with the contraction are set free; and, coming into due action after long disease, nature kindly renders her assistance, and thus restoration is commonly more perfect than those who are unmindful of what nature, aided by art, can effect, are capable of supposing.

But I well know that where a ligament or tendon is bound down by a firm cicatrix, it is often good practice to remove such part of it as will enable us to liberate an elbow, finger, &c.

Can we remove a cicatrix of some inches in dimension, without having the space so laid bare covered with a new one, which will infallibly form as complete an impediment to the free motion of the neighbouring parts?

I am, Sir, very respectfully,
Your humble servant,
GEORGE NESSE HILL.

Chester, Feb. 20, 1824.

To the Editor of THE LANCET.

SIR,—Reading in *The Lancet* the account of an experiment of transfusion, performed by Dr. Blundell, assisted by myself and others, I beg leave to transmit a few more particulars respecting it. First, it was the blood taken from the carotid artery of one dog, that was injected into another dog, which had been drained till a state of apparent death was produced. Secondly, Dr. B. does not recommend the injection of blood into the jugular vein of a woman, but into some vein more remote from the heart, as of the hand or arm for instance. Thirdly, it is not the blood of animals which Dr. B. proposes to inject into the human veins, as he tells us in his physiological lectures that he doubts whether the blood of one genus of animals can be safely substituted for that of another, but human blood itself to be taken from the arm of another person by venesection. Fourthly and lastly, Dr. B. considers it essential to the success of the operation, that by means of a

proper instrument the blood be injected into the vein of a patient, as fast as it issues from the vein of the person who emits it, without lodging in the cups of the syringe for more than a few seconds at most. It may not be amiss to add, that the syringe and joints of the instrument, which we employed in this experiment, are made to work under water, so as to preclude the possibility of the entrance of air into the apparatus, as air getting into the veins produces dangerous, and even fatal, effects.

I am, Sir,
Your obedient servant,
ROBERT JOHN LINTON.

Guy's Hospital, Feb. 23, 1824.

P. S. It is a fortnight since the experiment, and the dog is quite well.

To the Editor of THE LANCET.

SIR,—Should you deem the following case of Chronic Stricture entitled to your notice, I shall be obliged if you will give it a place in *The Lancet*.—It has been drawn up and sent to me by the patient himself, whom you will perceive to be a member of the medical profession. In No. 290, of the *Medical and Physical Journal*, page 301, I expressed my sentiments pretty much at large on some cases of a similar nature, wherein I had witnessed the most decided advantage resulting from leeching the perineum in strictures, to which I beg leave to refer; but, as I then observed, I do not wish to take credit to myself for that which belongs to others. I am indebted to Dr. Price's valuable treatise* on leeching, and to witnessing the treatment of a case which occurred in his practice, for my adoption of this plan for the radical cure of such affections.

In the cure of stricture, I consider much also depends on the nature of the instrument used; it has been my practice to use those of a metallic nature in preference to common bougies, as, on account of the equality and solidity of their pressure, they are more effectual in promoting absorption, and dilating the urethra.

I am, Sir,
Your constant reader,
ROBERT ROWLEY, jun.

83, *St. Margaret's-Hill, Southwark, Feb.* 26, 1824.

J. B., the subject of the following case, a practitioner in the country, some years ago received a fall from his horse, while visiting a patient, at which period the most excruciating pain was felt in the perineum, which, in the course of two months after the accident, was followed by a slight discharge from the urethra, with some degree of pain and

* A Treatise on the utility of Sangui-suction, or leech-bleeding, in the cure of various diseases, &c.—By REES PRICE, M.D.—12mo. London, 1822.

scalding, in voiding his urine. These symptoms continued, and gradually increased, until the most complete strictures had formed in the urethra, accompanied with great efforts to void urine, together with inexpressible pain, and irritation, at the neck of the bladder. On the 23d Dec. last, a total retention of urine took place. About thirty-six hours had elapsed without being able to evacuate a drop of water. During this period, four surgeons were called in; but the last only, Mr. Rowley, having previously abstracted 36 ounces of blood from the arm, and administered a large dose of tincture of opium, was able to succeed in introducing the catheter into the bladder, which he accomplished, however, after passing five strictures, when about five pints of urine were evacuated. A dozen leeches were soon afterwards applied to the perineum, and repeated daily.

Fomentations of camomile flowers and spirits of wine were also frequently applied over the region of the abdomen with the greatest advantage, and large doses of opium exhibited to allay irritability: and here it may be worth observing that the effects of opium, not only in this, but almost in every other case of extreme irritability, is attended with astonishing benefit, more particularly where the quantity is duly proportioned to the state of the nervous excitability. By a steady perseverance in the application of the above number of leeches on the perineum, every second or third day, with the occasional introduction of the catheter, or sound, a perfect cure of these strictures has been effected.

The writer of this paper begs to observe that he considers himself highly indebted to Mr. Rowley, inasmuch as he never saw or heard of strictures being thus treated, until his communication with that gentleman.

London, Feb. 15, 1824.

Extirpation of the Parotid Gland.

THE following case is taken from the *Archives Générales*. The operation was performed at the *Hôpital de la Pitié*, by Professor Beclard:—

Louis Francis Clouet, paper-sizer, came to the *Hôpital de la Pitié*, on the 19th of last August, to put himself under surgical treatment for an ulcerated scirrhus, which he had in the region of the right parotid. This man was forty-seven years of age, of an apparently good constitution, and a sanguineous temperament. The disease commenced eight years before his admission, by a hard, round, and moveable tumour, without any discoloration of the integuments. For a long time indolent, and of small size, it had at last become the seat of lancinating pains, and increased rapidly,

at the same time losing its mobility. The skin which covered it had assumed a deep red tint, and a slight ulceration had attacked it, which was sensibly spreading. This was the state of the patient on his entrance into the hospital. The cancerous swelling projected considerably forwards from the bed of the parotid. Superiorly, it raised the lobe of the ear, and appeared to affect the cartilaginous portion of the meatus auditorius; inferiorly, it extended more than an inch beyond the angle of the jaw; posteriorly, it was attached to the sterno-cleido-mastoideus, on the outer surface of which it was situated; anteriorly, it covered a great part of the masseter. The tumour was ulcerated in two places, and it had become nearly fixed. There was no sign of cancer in any other part of the body. The patient wished for an operation; M. Beclard performed it in the following manner:—

The man being placed on the left side, two curved incisions were made, so as to completely encircle the tumour; the one at the lower and back, the other at the upper and fore part of its circumference. The portion of the scirrhus placed on the masseter was first dissected from before to behind, without much difficulty. Then it was attempted to separate the tumour from below to above; but an elongation of its substance penetrated to a considerable depth posteriorly, and under the pterygoideus internus. An attempt to raise by the first stroke this portion of the scirrhus, would have been to expose oneself to an hæmorrhage which it would be difficult to suppress during the operation. M. Beclard decided on dissecting from the lower to the upper part, by conducting the bistoury into the substance of the swelling itself, at the point of its elongation; whilst in front and behind, the instrument divided the cellular tissue which unites the scirrhus to the neighbouring parts. The lower half of the cartilage which goes to form the meatus auditorius externus, diseased as well as the neighbouring part of the parotid, was removed with it in this first step of the dissection. Numerous arteries were seized with the forceps, and immediately secured. The operator then proceeded to the extirpation of the remainder of the tumour. A portion of the anterior boundary, and of the internal surface, to the sterno-cleido-mastoideus, that had been converted into a scirrhous substance, was divided by the bistoury. The elongation, situated behind the jaw, was excised by successive strokes of the knife; already had the whole of it been nearly removed, when a large jet of red blood announced that the external carotid was wounded, or one of the branches just at its origin was divided. M. Beclard placed the fore finger of the left hand on the spot from which the blood spouted

out, seized a pair of forceps, and succeeded in raising the vessel below the opening, which was lateral. During the suppression of the hæmorrhage by this means, a needle, with two double ligatures, was immediately passed round the carotid, an assistant applied one above and another below the opening. The artery was kept forwards and a little raised, whilst the extirpation of the remainder of the parotid was completed. One small elongation only of the tumour, placed before the cervical vertebræ below the inferior angle of the jaw, appeared as if it ought not to be touched on account of its proximity to the internal jugular vein. M. Beclard merely passed a double ligature under it by means of a needle, one of which was tied at the upper, the other at the lower part of this projection. The wound from the operation was considerable; it presented the masseter dissected as for an anatomical preparation; the branches of the seventh pair had been removed with the tumour. The labial artery laid bare, but not opened, was pulsating in front of the lower part of the masseter: the mastoid process, and the sterno-cleido-mastoideus, cut in front and on its inner surface, formed the posterior part of the wound. Internally, the styloid process, the external carotid secured by two ligatures, the stylo-hyoideus, digastricus, and, a little lower, the small portion of the tumour that was tied, formed the floor of the wound, which opened into the meatus auditorius externus. Dressings were applied to the wounds. The examination of the tumour exhibited throughout a scirrhous state, mixed with a small quantity of tuberculated matter. It was impossible to distinguish from the rest that which belonged to the parotid. For the first few days after the operation, no untoward circumstance presented itself; but during this time some interesting circumstances were observed.—All the right side of the patient's face remained absolutely unmoved by the play of the physiognomy; if he endeavoured to put any expression in his features, the muscle of the left drew the moveable part of the right side, so as to make the most singular grimaces; when asleep, the right eye remained constantly open, and in a short time the irritation and dry state of the conjunctiva were followed by a slight but obstinate ophthalmia. At last, during the suppuration of the wound, the patient experienced a little deafness of the right ear, produced either by the inflammation which had spread to the lining membrane of the meatus auditorius, or by the puriform discharge, or the swelling of the neighbouring parts, which had obstructed the duct.

Healthy suppuration was established,—even red granulations covered the wound; when, on the twelfth day from the operation, the patient was

seized with a shivering, followed by heat and fever; in the evening an erysipelas covered the right cheek, and on the next morning a phlegmonous erysipelas on the lower and back part of the right side of the neck; at the same time the fever had become very high, and was also attended by delirium. Bleeding, both general and local, only afforded slight relief to those symptoms for the three following days. At the end of this time the erysipelas of the face terminated by desquamation; the integuments of the neck lost their redness; but there remained a slight puffiness, which was soon succeeded by an abscess situated rather deep under the right trapezius muscle. The frequency of the pulse, and the derangement of the intellectual faculties, still continued. An opening made with a bistoury on the most prominent part of the abscess, gave vent to a considerable quantity of pus, which was of a yellowish-white colour, opaque, and void of smell. For a few successive days an extensive suppuration, kept up by the separation of the parietes of the abscess, into which the air entered, produced such a rapid wasting of the body and loss of strength, that the death of the patient appeared very near. By means of a counter-opening and pressure on the part kept up by graduated compresses, assisted with strips of adhesive plaster, adhesion of the sides of the abscess, which nearly extended from the occiput to the shoulder, was produced. During this time the wound had followed a regular course. The ligatures placed on the carotid and round the remainder of the scirrhus had come away, drawing with them this last portion, which had become mortified. In a short time the appetite and strength returned, and the fever disappeared; but to the delirium there had succeeded a kind of silence or melancholy, from which the patient never roused himself, except to give way to fits of anger similar to those which maniacs fall into. No remarkable change manifested itself in the course of the treatment; and at present, three months from the operation, the wound is closed, except near the ear, where it has assumed a character which denotes a return of the cancer. The patient is still deranged, and appears affected with a chronic meningitis, which will probably soon prove destructive to life.

From this case the following conclusions may be drawn:—1st. The scirrhous affection of the salivary glands, which is denied by some authors, is again confirmed.—2dly. This case puts beyond the shadow of a doubt the possibility of extirpating the parotid. The description of the bottom of the wound, and the laying bare of the external carotid, evidently shew that the operation

was not confined, as most of those designated by the name of extirpation of the parotid are, to the removal of a superficial tumour which had depressed it, and produced a wasting of it.—3dly. The hæmorrhage created during the operation, by wounding the carotid, may be stopped by a ligature; but it would be dangerous, if this operation were again performed, to endeavour to remove, by the first incision, that portion of the scirrhus which may be fastened as a wedge behind the jaw. The opening of the carotid, in doing it, might cause the death of the patient during the operation. By removing the largest portion of the scirrhus first, and then cutting away the rest by successive strokes of the knife, as in the above case, the artery may be more easily taken up at the instant when it is wounded.—4thly. The symptoms which supervened on this operation are common to it, as well as all others. Erysipelas and delirium manifest themselves after operations performed on the face, and the return of the cancer is but too frequent when it has been most completely extirpated.—5thly. The paralysis of the muscles of the face is naturally explained by the division of a branch of the seventh pair.

It appears that the orbicularis palpebrarum does not receive any twigs from the branches of the fifth pair, which come out through the orbit, or *foramen infra orbitarium*; that the facial alone can give it irritability, and the determinations of the will, since the right eyelids remained constantly separated from each other, even during sleep.—A female of a good constitution, who was attacked last month with a paralysis of the seventh pair, was in the same situation as the man the history of whose case we have just given, being incapable of approximating the lids of the affected side.

P. S.—Clouet died three weeks after the above observations were written. The inspection of the body shewed—First, The external carotid lost in a fibrous tissue the result of the cicatrix, which occupied the region of the parotid; there was no vestige of this gland left.—Secondly, The internal jugular vein was obliterated at the same height; but it was discovered a little lower down, communicating with the superficial branches; the corresponding lateral sinus was not obliterated.—Thirdly, Pus in the meatus auditorius externus only, the membrane of the tympanum being quite sound.—Fourthly, A well-marked injection of the pia mater, and particularly of the *velum interpositum*, which was redder than the plexus choroides. In the lateral ventricles there was serum, holding in suspension particles like those which are deposited from some red wines.

LECTURE XXXVIII.

Urinary Calculi.

THESE are found in four different situations in the urinary organs, viz. in the *kidney*, *ureter*, *bladder*, and *urethra*.

The calculi, which are discovered in the prostate gland, are not, in general, of the same kind as those met with in the organs which I have just named.

Calculi in the Kidney.

When a calculus is situated in the kidney, there will be felt considerable pain in the loins, in the vicinity of this organ, and occasionally it will be so very acute, and the part so exquisitely tender, that the afflicted person cannot allow even the slight pressure of a clothes-brush over the loins. —A physician of my acquaintance informed me that he had witnessed a case of this description, in which the only symptom that served to illustrate the nature of the disease, was the extreme tenderness felt in the loins, and it was so severe that the patient could not suffer his clothes to be brushed over the part; upon an examination of his body, after death, a stone was found in the kidney.

When a calculus is situated in the kidney, it is often accompanied by a numbness of the intestinal tube leading from the kidney to the navel. There will likewise be felt great pain when in the act of stooping, with frequent inclination to make water. The urine is frequently of a dark colour, from being mixed with blood; when this appearance is present, coupled with excruciating pain round the loins, it will generally happen that the stone is then in the act of descending, and in a few days afterwards, you will probably find that it has entered the bladder. When a calculus is in the kidney, the stomach is usually very much affected, and frequent vomiting is the consequence. The urinary bladder is often, from the same cause, rendered exceedingly irritable; and all means that could be devised have been known to fail in procuring relief from this troublesome symptom. An example of this kind occurred when I lived in the City; a surgeon called, and requested me to see a boy, a patient of his, who had an extremely irritable bladder; he stated that he had tried every medicine he could think of, and yet could not produce the slightest mitigation of the boy's sufferings. I saw the child, and prescribed for him;

but with as little effect, and he ultimately died. I met the practitioner a short time after, who told me, that upon a post mortem examination, the pelvic, abdominal, and thoracic viscera were all healthy, with the exception of one kidney, in which was found a calculus. I have known a stone in the kidney cause severe pain at the anterior superior spinous process of the ilium.

In cases of calculi in the kidney, nature generally makes attempts to discharge them through abscesses formed in the loins.—I had three calculi in my possession, which were discharged in this manner, and as they came directly from the kidney, I was anxious to learn the nature of their composition. I therefore sent them to the late Dr. Marcet, who upon analyzing them, found that each was composed of the triple or ammoniaco-magnesian phosphate.

Calculi in the kidney sometimes produce such a derangement of the constitution, as to occasion the destruction of life; and upon dissecting persons who have been thus destroyed, the calculi have been met with in various parts of the kidney, in the tubuli uriniferi, infundibula, and in its pelvis. Sometimes calculi in the kidney are modelled, to the internal form of that gland. It happens thus—when the stone has become of sufficient bulk to fill the pelvis, projections branch off from its body into the infundibula, acquiring the character which you here observe *(holding up a preparation.)*

It is not uncommon for a calculus to occasion an absorption of the glandular substance of the kidney, and a stone lodged upon the beginning of the ureter has been known to have produced so complete an absorption of the glandular structure, that no more than a thin membrane has remained.

When both kidneys are affected at the same period, or if they successively become destroyed, in either case death must ensue.

Treatment of Calculi in the Kidney.

But little can be accomplished by the medical man in these affections; when the stone, however, is composed of uric acid, the exhibition of potass or soda is, I believe, attended with considerable advantage; not that either of these medicines will dissolve a stone when once formed, but I am inclined to believe that they prevent the further deposition of uric

acid; they most decidedly lessen the irritability of the urinary organs,—and by covering the surface of the stone with a sort of mortar, it becomes much less annoying to the patient and much less irritating to the part in which it is contained. Beyond these effects I think lithontriptics have no power.

Surgical writers have proposed that stones in the kidney should be removed by the knife. I am not aware, however, that such operations have ever been performed. Mr. Cline, sen., once informed me that he had a patient under his care, in whose kidney he could distinctly feel a calculus. This person was remarkably thin, owing to which circumstance, the stone was discoverable by means of an external examination; an individual so situated, if his constitution were in a healthy condition, might successfully undergo the operation, otherwise it would be too much for his system to bear. Nature, as I before observed to you, will often effect a cure by the formation of abscesses, —the calculi being permitted to escape through the sinuses which they create. Through these openings, by means of a probe, you may readily feel the calculus; and to prevent the closure of the sinus, by granulations, you should introduce a sponge tent. In order to facilitate the discharge of the stone, you may dilate the sinus by means of a bistoury; there will be no danger in doing this, for the emulgent artery and vein are situated behind the calculus. Well, this is all that I have to say to you respecting stone in the kidney, and shall now proceed to the consideration of

Calculi in the Ureter.

When the stone has descended into the ureter there will be felt great pain at the spine of the ilium, at the anterior superior spinous process, in the course of the psoas muscle, and over the surface of the abdomen; as the calculus passes along the ureter, at the time it crosses the lumbar plexus there will be experienced very, very great uneasiness in the groin, and in the course of the anterior crural nerve down the thigh; when it goes over the spermatic plexus, the cremaster will be spasmodically contracted, and there will be felt severe pain in the testicle; the stomach will likewise be particularly irritable and continually eject its contents; the skin covered with cold sweats; with a death-like paleness of

the countenance; the pain is not constant, but comes on at intervals; after continuing for some minutes, a complete remission occurs, and you therefore suspect that the stone has passed; after a lapse, however, of ten or fifteen minutes, it returns with as much severity as before. I have known an instance in which the violence of the pain was so great from a calculus in the ureter, that the patient absolutely lay down on the ground and rolled about, so intense was the agony, and though not more than a quarter of a mile from his residence, he was under the necessity of being carried to his house by the servants. The symptoms which have been just mentioned teach you most unequivocally, that a stone exists in the ureter.

It not unfrequently happens that nature fails in her attempts to relieve; the disease then necessarily terminates in the destruction of life. One case of this kind has been witnessed by Mr. Hallam; matter and urine were for a considerable time discharged by stool, but from what cause could not be imagined; when the individual died, upon an examination of his body, a stone was found impacted in the ureter; the colon and ureter were united by means of the adhesive process, and an opening, about three-quarters of an inch from the kidney, had been made from the latter into the former, which satisfactorily explained the origin of the pus and urine evacuated from the intestines before death.

Here is a preparation (*shewing one to the Students*) which was taken from a boy who had been successfully operated upon for stone in this Hospital, by Mr. Cline, sen.; in a short time subsequent to the operation, the lad suffered from severe pain in his loins, this was quickly followed by rigors, and lastly death; when his body was examined, a stone was discovered in the ureter. A woman once came to my house complaining of a most lancinating pain in the belly and loins, together with excessive vomiting. I told her that she was much too ill to be absent from her house, and advised her instantly to return home and send for her medical attendant. In company with this gentleman I soon afterwards saw her; at the expiration of three days she died. When we afterwards examined the body, the instant the surgeon cut into the abdomen, there issued through the opening a strong urinous smell; on prosecuting

the examination, we found a stone lodged in one of the ureters; this obstructed calculus had given rise to an abscess, which had burst into the cavity of the abdomen, whence arose the almost sudden dissolution.

But it every now and then happens, that calculi of the ureters will escape without proving destructive to life. Mr. Stone, a surgeon in Sussex, had a carter in his neighbourhood, to whom such a result happened—the man for a long while felt a severe pain in the direction of the ureter—at length an abscess formed upon the spine of the ilium, and when it broke there was discharged through the opening this calculus (*shewing it to the class*). From its figure it is evident that it was formed in the ureter;—the man ultimately did well.

Now, Gentlemen, of the

Treatment of Calculi in the Ureters.

During those violent paroxysms of suffering which I have detailed to you, the patient should be bled to syncope—you should give him opium, potass may also be administered with advantage, for I do believe that it lessens the irritability of the urinary organs, and in this manner will afford considerable relief; the person should also be put into a warm bath, and when in that situation, the surgeon should sit by his side, and rub the abdomen in the course of the ureter; for the urine having collected above the stone, and its vis à tergo being insufficient to push the calculus onward, friction, properly directed, will prove of great service by its mechanical influence on the accumulated fluid, and it will be found agreeable to the patient rather than otherwise. Well, then, the plan to pursue is, to bleed, with a view of preventing inflammation; to give opium and potass, for the purpose of diminishing pain and irritability, and mechanically to assist the passage of the stone by rubbing the surface of the abdomen in the course of the ureter.

Calculi in the Bladder.

The next situation in which calculi are formed is in the bladder; and as much can be done in this complaint by surgical treatment, we shall dwell more at length on the circumstances attending it, and describe to you the operation required for removing a stone from the bladder. Directly a stone enters the bladder, the

symptoms change; there will be a pain along the urethra, extending from the neck of the bladder forwards, though this is not always present; but opposite to the frænum, about an inch from the extremity of the penis, there is always considerable pain; and the patient walks with difficulty, with slight pain at the end of the yard. Some persons will come into your room, sit down, and say that they think they have a stone in the bladder, and talk lightly of it; but you may depend, Gentlemen, that they have no such thing; the pain felt opposite to the frænum, in cases of stone of the bladder, is as if a knife were running through the penis, and they will describe it as a deep-seated pain. It is different in degree in many cases, some being exceedingly irritable, others being much less so—but the pain is generally very severe. Very little urine can be kept in the bladder, and the patient feels a frequent disposition to void it. Pain opposite to the frænum, and a frequent disposition to void the urine, are symptom attending stone; and if there is much irritation, bloody urine will be voided; indeed this is a constant concomitant, and is a symptom you should particularly inquire for: it is not always present in the very young, but in adults, and those who have been afflicted with stone for a long time, this symptom will be met with. Where persons who have stone cannot ride on horseback without being obliged frequently to dismount, and void their urine—what you find is this, they go a short distance, then are obliged to stop and get off, and discharge their urine, which is bloody. If they ride in a carriage it is the same, they are obliged to stop and get out—and if they are in the company of friends, and wish to conceal it from them, the desire to void the urine is so great, that they are obliged to sacrifice their natural delicacy of mind to the irresistible call of nature. The urine is not changed unless there is much irritation in the bladder; but if the stone has been of long standing, and there is disease in the bladder, there will be clots of blood in the urine. When the mucous membrane of the bladder is affected, the urine will be white, which will shew that the bladder is diseased; there will also be flakes of matter in it, and when this is the case, the patient is in a state that would be improper for an operation. There is a sudden ar-

rest of the urine during the flow of a full stream, in consequence either of a valve formed in the urethra, or the stone resting against the neck of the bladder. The diagnostic symptoms of stone in the bladder are pain towards the extremity of the penis, opposite to the frænum, discharge of bloody urine; sudden arrest of the water during the flow of a full stream, and a frequent disposition to void the urine; and pain in doing it, particularly in the erect position. Persons with stone are frequently obliged, when they make water, to rest their heads against something, to bend their arms and legs, and thus discharge their urine.—There is a disposition also to void the fæces at the time of making water, as the rectum obeys the motion of the bladder. In some cases the abdominal muscles are affected with violent spasms. First, persons are affected with violent spasms of these muscles —then have disease of the mucous membrane of the bladder —and frequent shiverings. This is so common a symptom occurring with stone in the bladder, and is so well known, that it will be unnecessary to dwell on it. One curious circumstance, generally observed when there is stone in the bladder, is an elongation of the prepuce, particularly in boys. This is singular, and not easily explained, unless it is produced by pressure on it when the pain at the extremity of the penis comes on; for as the pain in this part is an exceedingly distressing symptom, and pressure on the nerve deadens it, it is made, and the prepuce thus becomes elongated by it. Having thus gone over the symptoms of stone, we shall now say a few words on the size, number, form, &c., of stones found in the bladder. Calculi are formed in the bladder around some extraneous body, which gets into it, and which is the nucleus, or about clots of blood; or the stones pass from the kidneys through the ureters, and enter the bladder. Some stones are composed of concentric lamellæ, whilst others are not; in those which are, layer after layer is deposited and adheres, but the lamellæ are composed of much firmer materials than the bond of adhesion which unites them. The nuclei, around which stones form, are various; here is one (*exhibiting it to the class*), as you see, composed of a needle; you will say, no doubt, that this must have been swallowed, and that passing through the intestines, it entered the blad-

der through the rectum. I will tell you how it got there. A nurse, who had the care of a child, put it to sit on a mat upon its naked bottom; and it immediately began to cry; when the nurse, out of humanity, I suppose, took it up, and danced it well in her arms; the more the child screamed, the more the nurse danced it. A few months after this it had symptoms of stone, and it was ascertained that there was one in the bladder. I cut the child, and took from it this calculus, with a nucleus formed of a needle. The needle must have penetrated the perineum, or the nates, and by this means reached the bladder. Here, Gentlemen, is a slate-pencil forming a nucleus. I will give you the history of the case. A man came to me, whilst I was living in the city, and said that he had a slate-pencil in his bladder; considering him to be mad, or wishing to impose, or that it was for the purpose of a quiz, I said very well, and prescribed something for him, and sent him away. About a fortnight afterwards this man came again to my house, and said that he had a slate-pencil in the bladder, and if I thought it a trick, I could examine him; this I did, I passed a sound, and found a stone. I then said, how came the pencil there? "Why, Sir," he replied, "I have had a stricture for some time, and have used bougies a good deal; but one day, not being able to pass one, I thought that I would try something that would be strong enough, and therefore introduced a piece of slate-pencil, which broke in the passage, and part of it got into the bladder." I told him that he must submit to an operation, in order to have it removed; and being a pauper, I advised him to go to a hospital, where proper care and attention would be taken of him. He came to Guy's, where I operated on him, and took the pencil from the bladder.—The stone which had formed round it is the triple phosphate; this kind of stone usually forms where there has existed much irritation in the bladder. Here is a piece of metallic bougie, or catheter, round which a stone formed. I will mention here, as I may not have an opportunity again, that pewter catheters should not be allowed to remain in the urethra more than a week, as the urine acts on the materials of which they are composed, makes them brittle, and if left in the urethra beyond the time I have mentioned, are

very apt to break, and then enter the bladder. Stones form round them, as in the case from which this specimen was taken. I have known several examples of this. Here is a curious specimen of a calculus formed round a piece of tobacco-pipe, which got into the bladder in rather a curious manner. It was sent to me by Mr. Godwin, surgeon to the Derbyshire Infirmary; the section has been made fortunately through the centre; one-half Mr. G. kept for himself, and the other part he was kind enough to send me.

You see that an extraneous body in the bladder forms a nucleus for a stone. The stone will be composed of the triple phosphate or of uric acid, according to the degree of irritation which had been kept up; if it has been considerable, the stone will contain the triple phosphate.

The next circumstance to which I shall advert is, the number of calculi found in the bladder. I do not think that the patient is in greater danger in an operation, from a larger number of stones being in the bladder, or even so much, as when there is only one large or moderate-sized stone.—The introduction of a pair of forceps into the bladder, for removing one or more stones, is not dangerous, but the great danger, Gentlemen, is, if the parts are bruised, and cause of irritation produced.—Here are nine calculi that were taken from one person; but this is not a great number.—Here are 37. The largest number that I ever took from one person is 142; it was from a gentleman of Worcester; he survived the operation, and I operated on him again; all the calculi consist of uric acid, or at least those which have been analyzed do, and the others appear to be composed of the same. It was this case which led me to say just now, that the introduction of the forceps for removing a stone is not dangerous; for at the first operation I introduced the forceps seventy times, sometimes withdrawing them without a single calculus, at others with three: after the operation he suffered very little; for the introduction of the forceps is not dangerous, but the danger arises from the bruise of the part, and from the violence used in extracting large calculi.

Size of Calculi.

The usual weight of calculi formed in the bladder is from half an ounce to two ounces; most frequently under two

ounces. The largest I ever extracted is the one I now shew you; its weight is sixteen ounces. After I introduced a pair of forceps, I was obliged to send for a gimblet, in order to bore it, but it was so firm that I could not. I succeeded, however, in extracting it by disengaging one blade of the forceps, using it as in midwifery, and then by bringing the stone under the pubes and above the os coccygis, I managed so as to remove it. Mr. Mayo, surgeon at Winchester, extracted a stone fifteen ounces in weight, but that was broken. The largest stone that I ever saw extracted without its being broken, (at the same time the patient surviving,) is one that was taken from a person at the Norwich Hospital, it weighed eight ounces. But the weight and size of stones do not bear a relative proportion, for some stones of considerable magnitude do not weigh much, whilst others which are small weigh a good deal. A very large stone, that was found in a body after death, weighed twenty-five ounces. There is one at Trinity College, Cambridge, which weighs thirty ounces; it is stated to weigh thirty-three ounces, but I believe thirty is the true weight. The stone of the greatest size and weight I ever heard of, was one taken from the body of a highly respectable individual, after death, by two eminent surgeons of this town. He had a paralysis of the lower extremities, and half of the body was insensible; in this state he was operated on for stone; but after various attempts at extracting it, the operation was postponed for a week, in order that some instrument might be obtained in the mean while, by which the stone might be broken. At the end of the week the operation was again repeated, but the stone was neither to be broken nor extracted, and the gentleman died from irritation. On examining the body after death, there was found a large stone in the bladder, which there was a difficulty of raising from its seat; it could not have been extracted if the high operation had been performed; it weighed *forty-four* ounces, and a slight addition, how many grains or drachms I am not exactly sure.

LECTURE XXXIX.

In the last evening's Lecture, Gentlemen, I began to describe to you the subject of the formation of calculi, the different species of calculi, and the symptoms which attend them.

I shall now proceed with this subject. The pain which a patient experiences from stone in the bladder is by no means in proportion to its bulk. It is not exactly in the inverse ratio to its magnitude, but still it approaches that inverse ratio. When a stone becomes excessively large, the patient generally loses the power of retaining his urine, and the distillation of urine from the bladder prevents that contraction of it which occasions so much pain to the patient in discharging the last drops of it. Doctor Franklin, the celebrated American philosopher, who died of this disease, suffered excessively for a number of years from it, but at last, when the stone acquired considerable magnitude, he experienced but little pain. The pain does not so much depend on the form of the stone as on the general irritability of the patient, and especially on irritability of the bladder. Thus you will sometimes in performing the operation find a stone excessively pointed, where the patient complains of but trifling symptoms; and, on the other hand, when the stone is perfectly smooth, the patient suffers extreme pain. The pain, therefore, depends more on the irritability of the bladder and the constitution of the patient, than on the form or surface of the stone; *cæteris paribus*, however, rough stones will give the greatest degree of pain.

There are four different kinds of calculi, when chemically examined. A very nice examination may lead to further discoveries on this subject; but at present we are only acquainted with four species. The first is the uric acid, which is a common, but not the most common form of calculus. The second is the triple phosphate, or ammoniaco-magnesian phosphate; the third species is the mulberry, or oxalate of lime, an excellent specimen of which occurred the other day in the boy at the other hospital. The other species was lately discovered by Dr. Wollaston, a most admirable chemist, and one of the first philosophers of the age, who developes every subject to which he applies his active and powerful mind, with an extraordinary degree of minuteness and accuracy. In examining the different calculi, he discovered the species which I am now mentioning, to which he gave the name of the cystic oxide. With respect to the uric acid, it is distinguished by concentric lamellæ, and when cut has the colour and

appearance of wood. (The learned Professor exhibited a specimen to the class.) It is soluble in alkalis, and alkaline medicines are therefore commonly recommended for this kind of stone.

The second species is composed of triple phosphate, or ammoniaco-magnesian phosphate. It is of a greyish white colour, and not so distinctly laminated as the uric acid. It is not soluble in alkalis, but it is acted upon by the acids; on the application of the blowpipe, it becomes vitrified. It is acted upon by the acids, but not in any considerable degree. A quantity of matter resembling mortar, which is, in fact, the ammoniaco-magnesian phosphate, is generally passed from the bladder, and the urine is highly offensive. I mention particularly these appearances, because this stone is constantly liable to be reproduced after the operation is performed, which is not the case with the uric acid stone. I will mention a case, which made a strong impression on me in earlier life, shewing the readiness with which the triple phosphate is re-produced. A gentleman came to me from Southampton with stone in his bladder. I operated upon him, and removed a triple phosphate calculus. He came to me again twelve months after, with symptoms of stone. I sounded him, and distinctly felt a stone; a consultation was had upon his case, and it was deemed advisable that the operation should not be performed. He went back to Southampton, where, after suffering extremely from the stone, he had it removed from the bladder by Mr. Lightford of Manchester. The stone was of such magnitude, that it was at first supposed that I had removed one stone, and left another in the bladder. A little time after the second operation, however, he began again to complain of symptoms of stone; he died a few months after, and, upon examination after death, three calculi, as far as I recollect, were found in his bladder. When I perceive the appearances which I have described to you, namely, the substance resembling mortar, which is in fact the ammoniaco-magnesian phosphate, I generally dissuade the patient from submitting to the operation. Another case illustrating the rapid reproduction of the triple phosphate strikes my mind at this moment. I removed a stone of this kind from a gentleman who came to me from Liverpool. A short time after he

began to complain of symptoms of stone, and upon sounding him I felt the instrument moving in a quantity of calculous concretions. He suffered extremely from this second formation of calculus, and requested himself that the operation might be again performed. I performed the operation, and removed a quantity of triple phosphate mixed with a large portion of coagulated blood. He recovered also from this operation, but before he left town to return to Liverpool the same material formed again in his bladder; I introduced a pair of forceps for the extraction of small calculi, and extracted eight portions of triple phosphate from his bladder. Whenever you observe the symptoms of triple phosphate calculus, be upon your guard against performing the operation, until you have corrected the disposition to its reproduction in the manner which I shall point out to you when I come to speak of the medical treatment applicable to calculous affections. The mulberry calculus, which consists of oxalate of lime, is to a certain degree soluble in the acids; it will be proper, therefore, to give in these cases muriatic or sulphuric acid; the muriatic acid is generally preferred. The cystic oxide has the appearance of brown sugar in a state of crystallization; it is not composed of concentric lamellæ. A stone from the kidneys has been analyzed by Dr. Marcet, and found to be of this species, but the opinion once entertained, that it is formed in the bladder itself, is not correct. Mr. Brande has analyzed 150 calculi, in order to ascertain the relative portion of materials in each species. The result of this analysis, as far as my memory bears me out, was as follows:—of the 150 calculi, 16 were uric acid. This led me to remark, that uric acid were not the most common; they occur in the proportion of 16 in 150. Forty-five were composed of uric acid in considerable quantity, with triple phosphate in a smaller proportion; uric acid *plus*, and triple phosphate *minus*. Sixty-six were composed of triple phosphate in a larger, and uric acid in a smaller proportion; triple phosphate *plus*, and uric acid *minus*. Twelve were entirely triple phosphates; five were composed of uric acid with a nucleus of the phosphate of lime, and six were mulberry calculi.

The analysis stands thus:—

Of 150 calculi

16 .... were uric acid

45 . . . . —— uric acid *plus*, triple phosphate *minus*
66 . . . . —— triple phosphate *plus*, uric acid *minus*
12 . . . . —— triple phosphate
5 . . . . —— uric acid with a nucleus of phosphate of lime
6 . . . . —— mulberry calculi

150

With respect to the medical treatment of calculi, when a person says to me, 'I think I can dissolve a stone by some chemical menstruum,' my features, which are more disposed to the risible than the solemn, are apt to give way; I generally smile. The menstrua employed for the purpose of dissolving stones in the bladder, undergo so much alteration before they reach the cavity of the bladder, that they can have very little influence on a stone which is already formed. Nay, I can tell you more, if those very menstrua be injected directly on the surface of a stone existing in the bladder, the stone will still remain undissolved. I witnessed an admirable case in the other hospital, which was kept for a length of time under a dresser of mine, who was very chemically disposed, and who thought he could dissolve the stone by the injection of the menstrua best adapted for that purpose. He did so for a long time, and taught the man to inject these menstrua into the bladder himself. I used, in going through the wards, to say to this man, "Well, are you any better?" The man shook his head. After a time, however, on my repeating this question, he replied, "Yes, Sir, I am better." "Oh, you are," said I, "how does that happen?" "Why, Sir," said the man, "I have learnt to inject opium into my bladder, and this gives me great relief, though I cannot say that any thing I previously tried did me any good." The opium tranquillized him at first, but after a time it lost its influence, and this man died of an ulcerated bladder. The whole internal surface of the bladder was ulcerated and covered with stalactites of triple phosphate. So much for injecting menstrua into the bladder with a view of dissolving the stone: still less influence can those menstrua have on the stone when taken internally, and altered as they must be when carried through

the circulation, and passing through the process of secretion before they reach the bladder. But though medicines cannot dissolve the stone, they will do good by diminishing the irritability of the bladder. This is strongly illustrated by the following case. Some years ago I happened to be at Norfolk, at a public breakfast, when I asked the lady of a naval officer, how it happened that the admiral was not there. She informed me that he was very ill, and wished me to call upon him. I found him lying on his sofa, suffering under the symptoms of stone, and upon introducing a sound, I chipped off a portion of calculus which he passed a short time after. I sent the calculus to Dr. Marcet, who, upon analyzing it, found it to be of the mulberry kind, that is, oxalate of lime, and, accordingly advised me to order the patient muriatic acid. I was happy to take the advice of Dr. Marcet, upon whose judgment I had the fullest reliance; but the patient derived no benefit from the muriatic acid, and I therefore advised him to take a drachm of the subcarbonate of soda four times a day. A considerable time after, on going to a consultation on the case of the Duke of Portland, at which Sir Everard Home, and Dr. Reynolds were present, Dr. Reynolds said to me, "So you have cured Admiral —— of his stone." I smiled, and observed that I had removed a good many stones, but that I had never cured any body of that disease. "Why," said Dr. Reynolds, "Admiral —— tells me, that since he has taken a medicine you recommended to him, he has been so well, that he has been able to go down to a Court Martial; 'and if,' added the Admiral, 'you can find me a pretty girl, Doctor ——, why, I could dance down five-and-twenty couple with her, (*much laughter.*) I have continued,' said the Admiral, 'to take a drachm of subcarbonate of soda four times a-day; though the stone falls over the neck of the bladder. I no longer feel any pain, and if you were to ask me now to submit to the operation, I would snap my fingers at you.'" It appears, therefore, that though medicines cannot dissolve the stone, they may lessen the irritability of the bladder, and greatly mitigate the sufferings of the patient. The soda diminishes the stimulating influence of the urine; it may also coat the surface of the stone; if it do, so much the better.

The following case affords a remarkable instance of the influence of the acids in altering the character of calculi, by acting on the surface, and diminishing irritability. A gentleman from Birmingham consulted Dr. Baillie and myself, on account of his passing a large quantity of triple phosphate with his urine. He was recommended to take the muriatic acid, and three days after he had taken it, the triple phosphate had entirely disappeared, but the uric acid was substituted for it, in as large quantities as the triple phosphate. As long as he continued to take the muriatic acid, he made uric acid; but when he left it off, the triple phosphate was re-produced; but whether he made triple phosphate or uric acid, there was no diminution of the secretion from the kidneys in point of quantity. The acids, therefore, will alter the character of the calculus, by acting upon its surface, and diminishing irritability; but they have no power of dissolving the stone in the bladder. This gentleman was relieved from the calculous secretion from the kidneys, by attention to his general health, and not by any medicines given with a view to the calculus. The liquor potassæ conjoined with opium has considerable effect in diminishing irritability; and it should be given for some time before the operation for stone. This medicine has a very beneficial effect in children who have stone in the bladder, and pass a large quantity of matter; it will remove this excessive secretion, and enable you afterwards to perform the operation with success.

Some little benefit may therefore be derived from medical treatment, by lessening the irritability of the bladder and constitution, but the stone will remain, and surgery alone will be the only effectual means by which the sufferings of the patient can be removed.

Operation of Lithotomy.

We shall now proceed to speak of the operation for stone, of the lateral operation, together with the high operation, and shall also shew you a forceps for removing calculi from the bladder, when they are small, without having recourse to any cutting operation. And first I shall describe the lateral operation; I shall not perform it this evening, for I don't know whether there is a subject or not, but I shall state to you the circumstances to be attended to before the opera-

tion, give you a description of the instruments required, and perform the operation on the next evening.

The first circumstance to consider before you operate for lithotomy, is whether the constitution of the patient is in a sound state, or his general health good. He who practises surgery must know that if an operation were performed as soon as the symptoms of stone arise, without first inquiring into the state of the patient's constitution, the surgeon would lose a great number of his patients, and soon injure his character; there is no operation in which an attention to the constitution is more necessary before it is performed, than that for the stone. The person should be in good general health at the time, for unless he is, there will be little chance of success. Those who have been exposed to the vicissitudes of life and to poverty, and have been obliged to labour for their bread, generally bear the operation for stone well, and in those persons the chance of success is considerably greater than in the higher ranks of society, and those you usually meet with in private practice. Let any man be honest, and he must acknowledge that in hospital practice there is infinitely more success than in private practice; for those who have been reared in the lap of luxury, and have drunk freely, if submitted to an operation for stone, frequently die from it. Therefore, with respect to the higher orders of society, unless a surgeon previously study the constitution, and require his patients to live differently from what they have been accustomed, he will injure his reputation, and lose his patients. Great advantage will be derived from putting a patient, who is to be operated on for stone, on vegetable food, a short time beforehand; it is not right that he should be on full, or animal diet. It is also improper to operate on a patient as soon as he is admitted into the hospital; the surgeon should wait, and have the patient prepared by giving him vegetable food, and also sounding him frequently; the introduction of the sound accustoms the bladder to irritation, and when it has been done pretty often before the operation is performed, the patient bears it infinitely better than when he has been operated on without it. You should also inquire whether there is any local disease of any organ; the kidneys sometimes become

altered when there is stone in the bladder. A man came to Guy's hospital having a stone in his bladder. I sounded him, but there was matter on the sound when I withdrew it; I said to the gentlemen present, that the man would not bear the operation, and on that account postponed it. In three weeks after, this man died, and on examining the body, the two kidneys were found in opposite states; one was one-third or one-fourth smaller than natural, and the other was double its original size; they are both preserved in the museum over the way. The patient would have died, if I had performed the operation on him, from the disease of the kidneys, and then I should have had the discredit of killing him. If the bladder is ulcerated do not perform the operation on any account, for it will not be successful. But especially never submit a patient to the operation for stone, if there be the slightest affection of the chest,—the least difficulty of breathing,—any sign of asthma, or any irregularity of circulation. No person who has any regard for the safety of his patient, or his own reputation as a surgeon, will ever operate for stone, unless the chest be free from all complaint. You hear of one surgeon being exceedingly successful in the operation for stone, and of another less so. The cause of it is this, the one is careful to select his cases; he puts aside all those who have any other affection, and tells them to wait, and only submits those to the operation who are free from any other disease. This is judgment, and it is right: unless the patient is suffering exceedingly from the stone, you should not operate until he is free from every other complaint.

As to the age at which the operation may be performed.—Some say, when a man advanced in years has a stone, that he is too old to undergo an operation, and the patient himself often says that he is too old; but this is not the case, and age is not an objection to its being performed. The time of life which is best fitted for this operation is about sixty-one or sixty-two, and at this period a great number of cases occur. After the age of twenty the danger of the operation increases, but between sixty and sixty-three more cases recover than at any other period; at least this is what I have seen. If a patient is loaded with fat, there is always danger from peritoneal

inflammation. As to advanced age, Mr. Cline, sen., has operated on a patient eighty-two years of age; Mr. Attenburrow, of Nottingham, has operated on a person of eighty-six. I have operated on a patient of seventy-six, but never on one older; this patient lived twelve years afterwards, and died at the age of eighty-eight: therefore, old age is not an objection to the operation, unless there is an enlargement of the prostate, when you must not operate. With respect to the very young, they are in considerable danger from the operation. I mean children before they are four years old. After four they acquire strength, and the irritability of the constitution is much lessened; under this age convulsions frequently come on after the operation; and in three days the children often die, more especially if they have lost much blood at the time of the operation. I have operated on a child of one year and nine months, and it has recovered; but very often indeed do convulsions come on after the operation for stone in the very young, which in most cases terminate existence. With regard to the success of the stone operation, it is quite certain, if the accounts published be correct, that the success lately has not been so great as it used to be. Of Cheselden's operations, if I recollect aright, only four in fifty-six failed. Mr. Martineau, of Norwich, has operated for stone with most extraordinary success. He has published a paper in the *Medico-Chirurgical Transactions*, which is well deserving of your attention; no surgeon in London, I am certain, can boast of similar success. The degree of success which is considered the most correct, is that taken from the result of the cases at the *Norfolk and Norwich Hospital*. When I was there, there were between two and three hundred cases registered; all the calculi were preserved, together with an account of the different operations performed for the removal of each, and I then took an opportuity of ascertaining what was the result of these cases. Since that time a more detailed account has been given by the late Dr. Marcet, in his work on calculi, from which it appears that *two* in *fifteen* died. Well, gentlemen, this is the result of the practice at the *Norwich and Norfolk Hospital*. Although I stated to you just now the result of the practice of two individuals (Cheselden and Mr. Marti-

neau), take care how you draw any deduction from particular cases. I and many others also have for a length of time met with extraordinary success in operating for the stone, when four or five unsuccessful cases in succession have come, which have generally brought the result to the amount I mentioned, viz. that *two* out of *fifteen* die. I should say, when it is stated that one in twelve only died formerly, what operator now is more successful than this with the greatest care, even with a selection of his cases, and with very extensive experience? Patients should not be sent away from the hospitals before they are quite well, for if they are, it not unfrequently happens that they die, and then the death of the patient is attributed to the operation.

Instruments used in Lithotomy.

What you require for the operation is a table, about two feet six inches high, and bandages to fasten the hands to the feet, and to draw the knees towards the body; you should give the patient an injection the day before the operation, and the rectum should be completely emptied, otherwise it will be in danger of being opened in the operation.

The first instrument that it will be necessary to consider is the sound; this should be of a large size. The sound, however, should be fitted to the size of the urethra; for if a small sound be used in a large urethra, or a large sound in a small one, the stone will very often escape being felt. You should sound the bladder, both when it is full and when empty. When a person comes to me with symptoms of stone, I order him to lie on some chairs, and sound him; but if I cannot discover a stone, I then ask him how long it is since he had made water; and if he says an hour or two, I direct him to void his urine; and it has frequently happened that I have felt a stone as the water was discharging, when I had not been able to do it before. In these cases I use a catheter, putting my finger over the orifice, and moving the instrument across the bladder; if the stone is not to be felt, I take away my finger, and then it frequently happens, that as the urine escapes, the stone strikes against it. Now, Gentlemen, if a person says that a stone may be readily felt when it is in the bladder, I would ask any surgeon, who has had the least experience, to confess honestly whether he has not

sounded a patient for stone, and has been unable to find one, when another surgeon has detected it in a moment.—It happened to myself—it happens to all. A patient came to me who had been sounded twice by as good a mechanical surgeon as any I know in London (though, by the by, a mechanical surgeon is only half a surgeon), and the stone had escaped his observation; yet on introducing the sound, I immediately felt it. If there is an enlargement of the prostate, the point of the sound frequently strikes against it, or passes over it, and in those cases the stone commonly escapes being felt.

The next instrument required is the staff, and this should be as large as the patient can admit; let the groove be large and deep, which will lessen the danger of the knife or gorget slipping in its passage to the bladder: the larger the groove, the safer it will be. The staff should be a little more curved than the sound, and it will then serve as a director for the knife: for if it is not, you will be obliged to lower the instrument you are going to introduce, in order that it may reach the bladder. When you are about to cut a patient for stone, let the staff rest on the stone, and I will tell you why:—I have seen too many instances where the gorget has not entered the bladder, and this has arisen from the staff not being in the bladder, but resting on the prostate, by which means the gorget has slipped, and passed between the bladder and rectum. The staff should be held perpendicularly, and should rest on the stone; then, when the gorget is introduced into the groove, it goes to the stone, and the forceps may be passed directly to the spot where it is. I again repeat, never let the staff rest on the prostate gland, but on the stone.

DR. JAMES JOHNSON'S "QUARTERLY JOURNAL," AND "THE LANCET."

"Mordear opprobriis falsis mutemque colores?
"Falsus honor juvat, et mendax infamia terret,
"Quem nisi *Mendosum* et *Mendacem*?"

We believe Dr. Johnson to be weak enough to give insertion, in his capacity of Editor, to an article which will infallibly destroy any reputation his Review may have acquired; but we will not believe, without the strongest evidence, that he is capable of descending to the mean and dishonourable arts of which we shall prove this reviewer to have been guilty, for

the purpose of injuring a rival Journal, which has studiously avoided all interference with its contemporaries, except that which is the result of fair and honourable competition. The success of *The Lancet* has no doubt affected the sale of the *Quarterly Journal*; the reviewer felt that he was struggling for a declining property; but though the success of a rival may excuse a more than ordinary degree of asperity in a falling journalist, it cannot justify fraud and mendacity; and the Reviewer's fraud and mendacity therefore shall be exposed. The Reviewer, with a propriety of metaphor which is strictly in keeping with the strength of his arguments, talks of "the Quarterly Journal's olfactories."* Now, whatever may be its own susceptibility to unsavoury smells, we foresee, that by the time we have exposed its ignorance, its falsehood, its vulgarity, and, above all, its unparalleled literary dishonesty, Dr. Johnson's Quarterly Journal will stink in the nostrils even of the few subscribers among whom it still continues to circulate. The Reviewer's article will acquire a publicity through the medium of our circulation, which it could not otherwise have obtained; its exposure, however, is a duty which we owe, not only to the character of *The Lancet*, which has been unjustly assailed, but to the public, on whom the Reviewer has impudently pretended to impose. We shall have occasion to return again and again to this task, and our present article will be chiefly devoted to an exposure of the literary character of the antagonist with whom we have to deal.

We have an Augean stable before us in the pages of a Review which boasts of its delicate olfactories; but we shall content ourselves on the present occasion with proving the Reviewer to be a consummate adept in the art of lying, and a wilful garbler and falsifier of the passages which he gives to his readers as quotations from the pages of his adversary.

We will commence with the following comments of the Reviewer, on passages purporting to be *bonâ fide* quotations from *The Lancet*:—

"Rendered bold in injustice, from the want of a curb, *The Lancet* commenced its predatory warfare on the literary property of the Medico-Chirurgical Society, unblushingly publishing the substance of the papers read at its meetings, and thus anticipating the volumes of their Transactions! The Society very properly put a stop to this iniquitous proceeding, and immediately all the scurrility of Billingsgate was let loose by *The Lancet* against the most respectable medical asscciation in Europe! The arguments which *The*

* "Our Journal's olfactories are not, thank God, so apt as those of THE LANCET at smelling out unsavoury suits!" Can any of our readers translate this into English? —ED.

Lancet urges against this prohibition, on the part of the Society, are tragi-comic enough; namely, that the non-promulgation of the papers in *The Lancet* (where they would have a more 'immediate and extensive *Reputation!!*') must be the destruction of thousands of lives annually!

"'Now let us conceive, that in this present month of January, some facts of this description (useful facts) are presented to the Society, and accepted by it; on the general application of which the saving of thousands of lives, of millions of pangs and throes of agonizing humanity depends. What would a stranger suppose that this Society, full as it must be of humanity and erudition, *composed of men mollified by the faithful learning of their ingenuous art*, would do in such a case? Can there be a doubt? He would imagine that he saw the members breaking forth with tumultuous exultation—*qua data porta ruunt*—some at the front, some at the rear; apothecaries and physicians, men-midwives and surgeons, dentists and oculists, licentiates and fellows in most "admired disorder," to publish the glad tidings far and wide, and pour balm into the wounds of human suffering. He certainly would be a little astonished, if, instead of this, he saw the Society deliberately contriving to conceal the knowledge it had acquired, till the end of the year, lest its profits might be diminished in its account with the bookseller. Really Dr. Solomon, *in all his glory*, was not to be compared in meanness to this. We should be glad to know what is the worst feature of quackery but a profligate contempt of the welfare of mankind, when put in the balance against the pecuniary interests of the medical practitioner? and what can be a more complete specimen of this than the deliberate suppression of useful knowledge? If the guilt of this disregard of public welfare be in proportion to the smallness of the advantage which the Society derives from it, the wretch who adulterates drugs, and destroys a patient, that he may pocket a penny on a pill, would not be entitled to rank so high in enormity as this Society, *if we supposed it to be fully aware of the consequences of its acts.*'—LANCET.

"We have copied the above as a fair specimen of *The Lancet*. The mock-heroic bombast, in the beginning of the passage, can only be equalled by the Billingsgate ribaldry and the rancorous vituperation of its conclusion. The idea of the Transactions of the Medico-Chirurgical Society acquiring *reputation* by appearing in *The Lancet*, in company with the 'Morbid Parts of Dr. Collyer,' and other choice morceaux, is so exquisitely ludicrous, that our sides were ready to burst on perusing the passage, which must afford no little entertainment to the members of that association."

—*Dr. Johnson's Medico-Chirurgical Review*, p. 976.

Now, in the first place, the words 'more immediate and extensive *reputation*' are quoted apart from the passage in which they appear, and emblazoned by a typographical artifice, to impress the reader with the belief that we had argued upon the supposition that the papers of the Medico-Chirurgical Society would acquire a more immediate and extensive reputation—not from their own *intrinsic merit*, but from the mere circumstance of their appearing in the pages of *The Lancet*. This is not left as matter of inference, but is stated boldly and distinctly, though with a vulgarity peculiar to this writer, in his subsequent comments.

We will first prove the unfairness of the Reviewer, by giving the passage of *The Lancet*, from which these words are artfully detached; and we will next shew his impudent inconsistency, by quoting a passage of his own, which is in substance an echo of the sentiments of *The Lancet*. The passage from which the words are garbled, is as follows:—

"The notices which the society forbids, we are persuaded would have a directly contrary effect; they would afford an additional stimulus to those who present the papers by holding forth a more immediate and extensive reputation for the communication of any useful discovery. Other societies, particularly the Royal Society, allow accounts of their proceedings to be published, being fully convinced that it must be a benefit to any body possessing *intrinsic merit*, to have the public eye directed towards its proceedings."

It is evident that if the proceedings of the Medico-Chirurgical Society, instead of being published in an 18*s.* volume at the end of the year, were given in substance every other week in *The Lancet*, the reputation which papers, or observations of intrinsic merit, would acquire, would be more *immediate*; and when it is considered that where the Medico-Chirurgical Transactions have five hundred readers, *The Lancet* has at least ten thousand, it will not, we apprehend, be denied that it would also be more extensive. As to the passage 'our sides were ready to burst,' &c., the abuse of the 'plural unit,' is only paralleled in vulgarity and absurdity, by a remark which we remember to have seen in a newspaper-report of a meeting in Palace-yard, where the reporter breaks off in the middle of a speech to observe, —"Here our pocket was picked of its handkerchief by a light-fingered individual in the crowd!"

But let us hear Dr. Johnson, or his Reviewer, in another part of this identical number of the Quarterly Journal, in which he coolly appropriates a large portion of the last part of the Medico-Chirurgical Transactions, introducing the Society's articles

with the following observations:—

"It is a great pity, we think, that the quality of the plates should so enhance the price of the work as to render it beyond the reach of thousands of the lower orders of the profession. The medical journals, however, remedy this evil to a considerable extent; and in order to aid in this *useful operation*, we shall give a very ample analysis of the articles in the order of their standing!"

The Reviewer, therefore, agrees with us that the circulation of the Medico-Chirurgical Transactions is too limited; and the only difference between us, on this point, is, that our articles, containing notices of their proceedings, were original, whereas he copies the contents of the Society's volume. He agrees with us as to the expediency of a more *extensive* circulation of their proceedings, and it is only the more *immediate* circulation which is given them by industry and talent, superior to his own, to which he objects. However contemptible the talents of the Reviewer, we must do Dr. Johnson the justice to own, that it is not for want of inclination or industry on his part, that original reports of the proceedings of the Medico-Chirurgical Transactions do not appear in the Quarterly Journal. Dr. Johnson himself made an attempt to publish their proceedings in the Quarterly Journal, which he subsequently abandoned, in consequence of a threat of expulsion on the part of the Society, if he persisted in it. We shall return to this subject in another number, as we purpose, for the present, to confine ourselves to the falsehoods and misrepresentations of the Reviewer.

In the extract from *The Lancet* of Sunday, Jan. 11th, all the passages which we have printed above in italics, are *suppressed* by the Reviewer. We will say nothing of the taste and propriety of alluding at all to the transaction connected with the name of *Dr. Collyer*, after the grounds upon which that transaction was ever noticed in our publication had been fairly stated in the preface to the second volume of *The Lancet*; and after we had distinctly declared our desire of dismissing the subject from our pages for ever. But what will our readers think of the despicable meanness, and the beastly obscenity of the Reviewer, when they find that the Reviewer has himself substituted for the 'Morbid parts of *Dr. Collyer's Case*,' the "Morbid parts of *Dr. Collyer!!!*" This is a tolerable specimen of the Reviewer's honesty; but we shall proceed to convict him of a tissue of falsehoods and misrepresentations, compared with which, even the above malignant and filthy substitution is venial.

Our readers will recollect

Mons. Magendie's interesting history of the case of hydrophobia, treated at the Hotel Dieu by an injection of water into the veins, was given in *The Lancet*, as soon as Mons. Magendie's journal arrived in this country*. The *Times* journal inserted the whole of our article, which occupied a considerable space in its valuable columns, and it was subsequently copied from the *Times* into almost all the journals in the kingdom. This circumstance, as our readers will presently perceive, has excited the most rancorous feelings of envy, malice, and uncharitableness in the *Quarterly Journalist*. Three months after M. Magendie's paper appeared in *The Lancet*, Dr. Johnson's Reviewer gives his readers a meagre account of the case—not from Magendie's journal, for that, it seems, he has not read, but at second or third hand from the *Archives Générales*; and he concludes the case with some observations, in which his attempt to persuade his readers that the second-hand commodity is the best in the market, is as ludicrous, as the falsehood by which he endeavours to support the subterfuge is flagrant and unjustifiable.

"We have not yet read," says the Reviewer, "M. Magendie's observations on this curious case, but merely analyzed the statement as published in the *Archives*—the most authentic source of medical information in Paris."

So the readers of Dr. Johnson's Review are to believe that a miserable sketch of the case, taken at second-hand from the *Archives*, is more authentic than M. Magendie's copious history of his own experiment in his own Journal! We certainly can allow for a considerable degree of irritation on the part of the Editor of the *Quarterly Journal*.—*The Lancet* anticipates him in every thing that interests the medical world, and leaves him to regale himself and his readers on orts and fragments.—"Chaff and bran, chaff and bran, porridge after meat." Our readers can conceive a Scotsman who has been anticipated at a dinner, peeping into jugs of flat beer, eyeing the too diaphanous vacuity of decanters, and the 'dishes which meat did once inhabit.' Such is the state of mind of the Editor of the *Quarterly Journal*, but not content with venting himself in the straight-forward and justifiable language of disappointment, he must swear, like Lord Peter, that his crust is most excellent mutton.

So much for the ludicrous part of the Reviewer's observations. Now for that portion

* The *Journal Universel des Sciences* is published on the 30th of every month, and M. Magendie's Journal was published so late in the month of December, that the editor of the former work was unable to avail himself of it until the 30th of January!! So much for Dr. James Johnson's Reviewer and his falsehoods.

of them in which the Reviewer's mendacity is brought into full play: "One nondescript medical newspaper, pretending to wonderful celerity, published the case in *January* here, as an astonishing instance of early information, though it was published in Paris on the 1st of *November*, and the Journal containing it in the hands of most well-informed men in this country more than six weeks!"—*Quarterly Journal*, p. 944.

It is an established principle in the art of lying, that the votaries of that accomplishment should never meddle with *dates*. Whether the Reviewer's malignity has, on this occasion, outstripped his caution, or whether, pluming himself on his unrivalled mendacity, he is likewise ambitious of acquiring a character for the intrepidity with which he scorns detection, we know not; we shall merely state the facts, and leave all comment upon them to our readers. The Reviewer asserts that we published the case in *January*. The case will be found in *The Lancet* of December.

The Reviewer asserts that it was published in Paris on the 1st of November, and the Journal containing it in the hands of all well-informed men in this country more than six weeks. This assertion is the more insidious, as it would account for the circumstance of that Journal not being in the hands of the Editor of the *Quarterly Journal*. The fact is, however, that the *Journal de Physiologie* is not published in Paris until six or seven weeks after its nominal date, and the Journal in question was not received in this country until late in the month of December. At this moment the number for January, in which M. Magendie has promised to give the results of all his experiments in cases of hydrophobia, has not yet reached this country.

Our readers will admit that we have produced some tolerably strong instances of the Reviewer's talent for falsehood and misrepresentation; we will give one more signal example of his abilities in this honourable vocation, and then leave him to the enjoyment of those satisfactory feelings which this week's dissection of his literary character in *The Lancet* is calculated to excite. The frequent insertion of extracts from *The Lancet*, in the most respectable journals of the day, particularly in *The Times* and *Chronicle*, has driven the unfortunate Editor of the *Quarterly Journal* to a state of phrensy; and in his desperate attempts to counteract the impression produced by that circumstance on the minds of the profession, and of the public, he has recourse to his usual weapon, which, as usual, he wields with more courage than dexterity—namely, direct, unequivocal, unblushing falsehood. We shall quote the whole passage, and then proceed to convict the Reviewer.

"The profession, and the public at large, must have remarked that, of late, scarcely a newspaper is published which does not contain extracts from certain weekly medical journals, and more especially THE LANCET. Have the editors of newspapers all at once discovered a mine of information in these sources, which never before existed? No such thing. The manœuvre now is, to cull out extracts from these twopenny-halfpenny pamphlets, and send them to the newspapers the day before the pamphlets themselves are published, with a solicitation that they may be early inserted, or if that cannot be accomplished, they are paid for as *advertisements*, being considered the best kind of puff, and of the newest fashion. Now for an example. On Sunday the 11th of January, 1824, was published No. 2 of Vol. II. of the Lancet. On that day, of course, there being no shops open in the metropolis, the Lancet could be in the hands of very few—in fact, nobody scarcely sees the work on that day unless he goes on purpose to Catherine-street, to purchase it. *At six o'clock* on the following morning (Monday) the tirade against the Medico-Chirurgical Society was published, as an extract from the Lancet, in that part of the *Morning Chronicle* which is notoriously set up and imposed, if not worked off, on the Saturday night preceding! Now we ask any man, who knows aught of the concerns of the press, whether it is likely that the editor of the Morning Chronicle spends his *Sundays* in searching for matter in medical journals *published that day*, to supply his newspaper, which is printed *that night, or rather the night before?* The fact of the extract being furnished by the Lancet itself, and that on the Saturday, is as clear as the sun at noon-day; and practising such disingenuous arts as these, *The Lancet* has set itself up, not merely a censor of printed works, but of the *conduct* of individuals in the medical profession!"—*Dr. Johnson's Quarterly Journal*, p. 976.

To the insinuation of this contemptible writer that we have ever *paid* for any extracts from *The Lancet*, which have appeared in the *Times*, *Chronicle*, and other papers, as it immediately affects the character of those Journals, we should deem it an insult to the English Press, if we said one word in reply. The charge of our having procured the insertion of extracts by *solicitation*, though the fact of their insertion in the *Times* and *Chronicle* is a sufficient refutation of its falsehood, we deem it right, as it chiefly affects ourselves, to meet by an indignant denial, and we publicly call upon the Editors of those Journals to do us the justice of inserting this part of our answer to our mean and unprincipled calumniator. So much for the general charge; one word as to the particular

instance by which the Reviewer has endeavoured to support it. He states that an article extracted from *The Lancet* of Sunday the 11th of January, appeared at six o'clock on the following morning in that part of the *Morning Chronicle* which is "*notoriously set up and imposed, if not worked off, on the Saturday night preceding*;" and he concludes by affirming, that the fact of the extract being furnished by *The Lancet* itself, and that on the Saturday, is as clear as the sun at noon-day. He states the ground on which he rests this inevitable conclusion, to be perfectly notorious to every man, who knows aught of the concerns of the press. Now either the Reviewer was acquainted with the practice which prevails in this respect in the conduct of the daily press, or he was not; in either case we will prove him to be guilty of deliberate falsehood. If he was not acquainted with the practice, he wilfully misleads his readers by a false assertion with respect to a practice of which he was wholly ignorant; if he *was* acquainted with the practice, he is still guilty of deliberate falsehood, for he must have known that the only day on which the daily, as contra-distinguished from the weekly press, is at rest—the only day on which that mighty engine ceases to disperse light and intelligence through the civilised world—is SATURDAY!!!

The only way in which we can account for the hardihood with which the Reviewer has promulgated falsehoods so easy of detection, is, that he relied on the success of a miserable conspiracy to *put down The Lancet*, the design of which was as contemptible as the means by which it was attempted to be carried into execution. 'A time will come,' says the Reviewer, 'when the bubble of *The Lancet's* reputation will burst,' &c., 'and when the hospital and lecture-room will be closed against professional traducers. It will then be seen whose pages are dullest!' This threat, it seems, was founded on a plan, concocted, we presume, under the auspices of the Reviewer, and as feasible as the project of taking a town by a syllogism, namely, to *put down The Lancet* by a speech from a pupil at St. Thomas's Hospital! The young gentleman, whose name we will ascertain when he makes his next speech, complained of an '*invisible* spy in the class,' and repeated several passages in Dr. Johnson's Review with tolerable accuracy. With respect to the publication of reports of Medical Lectures, Hospital-cases, and all public Medical Transactions, we are fully prepared to defend its expediency; the only question in which the public are interested, and to expose the absurd and puerile arguments which are urged against it by the feeble writer in Dr. Johnson's Review.

MEETING OF STUDENTS AT ST. THOMAS'S HOSPITAL THEATRE.

At the conclusion of Mr. Green's last lecture, and after our Reporter had quitted the theatre, that gentleman either amused or annoyed the students by delivering a sort of non-descript epilogue on the inexpediency of giving publicity to medical lectures. We deem it unnecessary to dilate upon this subject here, as we shall occasionally, under the head, *Dr. James Johnson's Quarterly Journal and The Lancet*, discuss the question fully and impartially; during which discussion we will expose the "butterfly" arguments of our opponents, and portray to the world in undisguised colours, the *malus animus* by which they have been dictated. At present, however, as a reply to some of Mr. Green's remarks, we will inform him, that appeals to the prejudices and passions are weapons possessing at best but a transitory influence, and are ever powerless, when wielded against those individuals who are resolutely determined to maintain their rights.

In consequence of the observations which fell from Mr. Green on the above occasion, his partisans, the advocates of secrecy and non-publication, convened a meeting of the students, on Monday evening, after the lecture of Sir A. Cooper, for the purpose, we were given to understand, of taking into consideration the propriety of *suppressing The Lancet!* the *possibility* of such an act having been, we suppose, previously resolved on.

A considerable time elapsed before a chairman could be procured; this obstacle at length overcome, the *oratory* commenced. The first of Mr. Green's supporters, in a voice more like that of a *drake* than a *nightingale*, informed the meeting, "that to publish lectures was unlawful, at least some persons thought so—that there were secrets in our profession with which the world ought not to be made acquainted, and if people in general knew them, medical men would be all ruined. For the purpose, therefore, of putting a stop to *The Lancet*, he begged leave to propose the following motion: "That a deputation do wait upon Sir A. Cooper, respectfully requesting him not 'to lecture' again until each gentleman shall have pledged his honour not to publish the lectures!" After this motion had been seconded—another of the admirers of secrecy rose: he occupied the attention of the meeting at least from fifteen to twenty minutes, and during the whole of this time did not utter a single intelligible sentence; every two or three minutes he jetted out a word, and then, as if sorry that it had escaped, the next two or three minutes were occupied apparently in whistling for its

return. The motions of his lips were irresistibly comic, and gave rise to excessive mirth.

A little creature now claimed the rostrum, who, by way of prelude, told the class that he was a gentleman; this was candid and proper, it was a *descriptio personæ*, which would never otherwise have occurred to the class. This gentleman, we strongly suspect, was the joint delegate of Dr. James Johnson, and Dr. Pearson, of Jonah celebrity, sent by the former to recite his three months' article, and by the latter, to convince *The Lancet*, by a living proof, that his philosophical explanation of Jonah's residence in the whale *might* be correct. The little orator spoke in an emphatic manner against the wicked LANCET, and among other pertinent fragments of logic, said, "Oh! what shall we all do? we shall get no lectures; and when the surgeons of the hospital *see* this *invisible* spy—they will not speak to the pupils for fear—." [The speaker was here interrupted by such a loud burst of laughter from the students, that he was compelled to sit down.]

A gentleman now stood forward, who, after stating that the publication of the lectures was not in the slightest degree a matter of consideration for the students, by way of ridding the class of the odium which must necessarily attach to them, if they thus continued to meddle with the affairs of other persons, proposed an amendment, that the meeting do adjourn to that day six months; which, on being seconded, was put from the chair, and carried by an overwhelming majority.

The original motion was now put, and scarcely any hands were held up in its favour.

The meeting was then adjourned agreeably to the amendment, and the students quitted the theatre.

As faithful chroniclers of events in the medical world, we have considered it our duty to notice the above proceedings. It has been a most painful task,—and the meeting itself was a most painful exhibition.

If Mr. Green had been present, we are confident he would have felt so disgusted at the stupendous ignorance of the advocates of mystery—secrecy—and non-publication, that he would at once have abandoned the cause, and mingled with the great majority of the class, if for no other object than that of freeing himself from so degrading a connexion. For the satisfaction of the St. Thomas's students, we have the gratification of stating that those who were most conspicuous for their folly are unknown at the Borough hospitals.

We must do the chairman the justice to say that he discharged his duty with strict propriety and impartiality.

MIDDLESEX HOSPITAL.

Case of Inguinal Hernia.

Feb. 27th.—James Roberts was admitted with an old inguinal hernia on the left side, which he had generally been able to reduce himself. In the present instance, however, it had been down about twelve hours at the time of his admission. After several unsuccessful attempts had been made by the house surgeon, with the assistance of the warm bath and venesection, it was reduced by Mr. Bell.

℞: Olei Ricini ℥ j.

Tr. Opii m xv. statim sumendus.

The next day he had a little fever, with tenderness of the abdomen; pulse 94; tongue slightly furred; bowels not open since the reduction of the hernia; some castor oil and an enema were given him, and the following draught three times a day.

Liq: Ammoniæ Acetat. ℥ ss
Mist: Camphoræ ℥ iss. Misce.

For the above draught, small doses of castor oil, with a few drops of laudanum, were substituted, in consequence of his bowels not being sufficiently moved by the laxatives already exhibited.

Hirudines xii. abdomini.

29th.—His bowels have been freely evacuated by the medicines exhibited yesterday; the tenderness of the abdomen is also considerably reduced; pulse 92, rather weak; tongue clean, skin of the usual temperature, and moist.

℞: Confectionis Aromaticæ ℥ ss.
Aquæ Carui, ℥ iss ft. Haustus tertiis horis sumendus.

March 2d.—His bowels are still rather relaxed; in other respects there is no alteration.

℞: Mist: Cretæ ℥j.
Conf: Aromat: gr. xv.
Tr. Opii. m. v. ft. Haustus ter die sumendus.

3d.—Bowels more regular to-day; skin natural and moist; pulse 94; the tenderness of the abdomen has almost wholly subsided.

9th.—All the symptoms of this man's case, which were for some days extremely favourable, have within the last forty-eight hours suffered a very considerable and sudden change. The abdomen, which had previously been free from uneasiness, is now acutely painful and sore on pressure. The patient lies in a sluggish inactive state, with great dejection of spirits. Pulse quick and weak, about 130; tongue furred; respiration frequent and oppressed. The hiccough, which was present from the commencement, still continues, but with diminished frequency and energy, as the symptoms already described become more urgent. His skin is rather more than naturally moist, and he is harassed and depressed by a colliquative diarrhœa.

Blisters were applied to the abdomen, but without any sensible relief, and the diarrhœa resisted the combined influence of the cretaceous absorbents, aromatics, catechu, and opium.

These symptoms continued to increase, his head suffered at last, and the patient became listless, stupid, and comatose, and died about five o'clock, p. m.

On examining the body, it was found that suppuration had taken place in the abdominal muscles, extending principally from the umbilicus towards the right groin. An ulcerated hole was observed in the linea semilunaris of the right side. The peritoneum was white and dense generally. —Near the hernial sac, under the collection of pus, in the muscles, the peritoneum adhered firmly to the intestines by strong layers of coagulable lymph.—The intestines were for the most part pale and empty; at some places inflamed patches were visible, especially in that portion which adhered to the peritoneum. A mass of intestine was knotted together near the mouth of the sac. This mass was much larger than could correspond with the portion of intestine that protruded. Both on the surface of the proper peritoneum, and on the peritoneal coat of the intestines there were masses of coagulable lymph of considerable size and irregular form adhering. In the sac itself there was nothing remarkable, it did not appear to have been the seat of inflammation. The omentum was but little altered, excepting on its edge, where it was discoloured and black. There was a red tinge of inflammation surrounding the pyloric orifice of the stomach. The suppuration in the abdominal muscles pointed outwards, and not to the peritoneum.

Fracture of the Skull.

Feb. 28th.—Daniel Courtney, who had fallen from a scaffold, was brought to the hospital about nine o'clock, a. m. He was totally insensible when admitted; when placed in bed his pulse was 112, and tolerably full—Stertorous and oppressed breathing, with a clammy moisture on the skin—Dilated pupils. —A wound was observed just above the right frontal sinus, where there was a stellated fracture of the frontal bone, extending apparently into the orbit. Both arms were likewise fractured, and from the olecranon of the right, several small portions of bone were extracted; both extremities were afterwards enveloped in rollers and splints. He had been bled by the house surgeon previous to the arrival of the surgeons *. When these gentlemen saw him, it was evident to them that the contents of the cranium had received a shock almost incompatible with recovery; it was not so evident, however, that there was any depression of the fractured portions of bone. Under these circumstances they did not immediately trephine, but determined to wait a little, " and

* He had not been bled, although the house surgeon said so.

should there be any thing like rallying of the life and strength of the patient, to trepan." At four o'clock, the appointed hour, he was *in articulo mortis*, and died in about an hour and a half afterwards, without any very manifest aggravation of the symptoms, excepting that the pulse became more and more feeble as the fatal termination approached.

Post-mortem investigation:—From the seat of the injury a fissure was discovered running into the orbit, and into the orbital plate of the frontal bone, where it became a fracture, for the fissure diverged and left a small insulated portion of bone. On tracing the fissure backwards it was found to run down on the temporal bone, through the mastoid process, and terminated about an inch from the foramen magnum. Where the blow had been received the fissure was very narrow, but on tracing it into the base of the skull, it was quite a gaping rent. Should the student inquire why the rent was longer at the part remote from the injury?—it would be accounted for on the principle of counter-fissure*.—Or should it be asked why the orbitary plate was fractured whilst there was only a fissure in the other parts of the cranium? it would be readily discovered to be owing to the greater brittleness of that part. Under the right temple, between the bone and dura mater, there was a coagulum of blood, amounting to more than two table spoonfuls, under the tunica arachnoidea; also there was blood effused generally over the brain. On dividing the fourth ventricle, a large quantity of serous fluid escaped.

The head was divided by a vertical section.

* These principles are ably discussed and illustrated by Mr. Charles Bell, in his lectures. There is also a paper on the subject in one of the volumes of his "Surgical Observations."

Concussion of the Brain.

March 9th.—Brummidge, a young man apparently about twenty-two years of age, was brought here this morning, labouring under concussion of the brain, produced by a fall from a window.

He was totally insensible when admitted. The pulse at this period varied very considerably, being, whilst in a state of rest, about 90, and suddenly rising to 112 on the least motion being produced—it was also slightly intermitting. His breathing was rather laborious and oppressed, but not stertorous. Pupils dilated, but not insensible to light. The scalp being shaved, and no external injury of any kind presenting itself, leeches were applied to the forehead and temples, and the scalp was ordered to be kept cool with the lotion of acetated ammonia, and an enema of house medicine was administered.

The clavicle and acromion scapulæ of the left shoulder were found to be fractured, and were secured by a bandage in the usual way. Shortly after his admission he bled freely from the nose, and vomited a considerable quantity of blood mixed with the contents of the stomach. After a short period had elapsed, his pulse became more frequent, about a hundred, full and hard, when about sixteen ounces of blood were taken from the arm. In the evening, on being roused, he was in some degree sensible; answered questions incoherently, and immediately relapsed into his former listless and inactive state of stupor. Skin hot and dry, and extremities warm.

The following medicines were ordered him:—

R. Ext. colocynth. comp. gr. xv.

Hyd. submur. gr. iii. fiant pil. iii. statim. sumendæ.

R. Liq. ammon. acet. ʒ iv.

Vini. antimon. tart. m. x.

Sp. ætheris nit. ʒ ss.

Aquæ distillatæ, ℥ iss.

Fiat haustus quartis horis sumendus.

March 10.—Has had a copious alvine evacuation during the night. He still lies in a listless dormant state, but on being roused, (which is more easily effected) is somewhat sensible. Pulse about 80, and tolerably full. Skin more natural. The cold applications to the head were continued, and two of the above pills again given him, and the draughts as before. Venesectio ad ʒ xvi.

This man's symptoms were considerably relieved by the last bleeding. The next day he became quite sensible, and was able to walk about the ward—pulse 72, and weak; tongue tolerably clean; skin rather above the healthy temperature; some degree of languor and lassitude, with a glassiness of the eyes, and tendency to drowsiness, or unusual propensity to sleep, at this period presented themselves to the observant eye.

The draughts were continued, and the following pill ordered him:—

R. Hyd. submur. gr. j.

Pulv. antimonialis, gr. iij.

Fiat. Pil. ter die sumenda.

17th.—Bowels rather confined; tongue a little furred; pulse about 70, and rather weak.—Has rather a disquieting head-ach at present, but nevertheless a great propensity to sleep, which at night is generally sound and undisturbed; same medicine continued.

R. Pulveris jalapæ compositi grana viginti cras primo mane.

From this period he did well.

LECTURE XL.

Operation of Lithotomy.

I BEGAN, Gentlemen, towards the conclusion of the last Lecture, to describe to you the

instruments required to perform the operation of Lithotomy. I stated to you the manner in which the bladder should be sounded, both as regarded its full and empty state, and that a stone could often be detected in one of those conditions when not in the other. I told you not to use too large or too small a sound, and explained the reasons for such instruction. In alluding to the staff, I particularly advised you to employ one having a deep groove, whereby the danger of the knife or gorget slipping is materially guarded against. You were likewise instructed, when performing the operation of Lithotomy, to let the staff rest on the stone. I have several times known, where this maxim had not been attended to, that the gorget has not entered the bladder, and it arose from the circumstance of the staff having been permitted to rest on the prostate gland.

When you sound a man for stone, I would advise you to be on your guard as to any queries respecting what you have discovered. Let your answers be rather equivocal and evasive than otherwise, for by a decisive answer either in the affirmative or negative, your reputation may receive unmerited injury. The reason why you should be thus cautious, after what I stated to you in my last, must be sufficiently obvious, viz., from the well-known fact, that a calculus may be detected by the sound at one time and not at another; so that if, after an examination, you were positively to tell a person that he had not a stone in his bladder, and upon being sounded the following day by another surgeon he was as positively assured to the contrary, if it should prove in the sequel that you were wrong, the patient would lose all confidence in you, entertain opinions unfavourable to your professional talents, and report you to his friends accordingly. Be therefore on your guard.

In the lateral operation of Lithotomy, you are to begin your incision a little on the left side of the raphe, immediately below the symphysis pubis, and carry it obliquely downwards and outwards to midway between the anus and tuberosity of the ischium, and the termination of the incision should be opposite the centre of the anus. Before you commence the incision, you should draw aside the raphe towards the ramus of the ischium on the right side. Never begin an

operation without having first reflected well on what you are going to do; and in making incisions through the skin, you should, before you apply the knife, mark out with your eye the course which such incisions should take, and the precise point where they should terminate. Well then, the first cut through the skin, made in the direction just mentioned, penetrates the skin and cellular substance, and lays bare the accelerator urinæ; you then with the fingers of your left hand push or draw the bulb of the penis under the ramus of the ischium on the right side, so that the next incision will pass between the bulb and crus penis of the left side; there is no necessity in reality for cutting the bulb, and it should therefore be avoided; well, carrying your knife forward between the bulb and crus, you divide the accelerator urinæ, and this you should do completely, for if you permit any portion of its fibres to remain undivided, particularly at the upper part, if the stone should be at all large, you would find that their contractions would very much increase the difficulty of withdrawing the stone; as soon as the accelerator urinæ has been cut through, you expose the transversus perinei; you are then to feel for the groove of the staff with the nail of the index finger of the left hand, and having fully satisfied yourself of its situation, you are to cut into it through the membranous part of the urethra by means of the same scalpel with which you made the other incisions—and then, fixing the beak of the gorget in the groove of the staff, you are to bring down towards you the handle of the latter instrument, while at the same moment you push the gorget into the bladder, with its point directed upwards, and its handle of course somewhat depressed. I give you this last direction for the purpose of preventing the dreadful accident of the gorget slipping and passing between the bladder and rectum, instead of its entering the former viscus: I shall say more of this unfortunate occurrence presently, and will now proceed to describe the gorget and knife.

Gorget.

The gorget, which was first employed in the operation of lithotomy, had no cutting edge, (here the learned Professor exhibited it to the students, as he likewise did every instrument which he described in the

course of the Lecture,) as you perceive, and this instrument has one very great advantage over the cutting gorget, viz., its use does not endanger the life of the patient from hæmorrhage, which, certainly, is a most important consideration; for no man who has practised much can say, if he speak honestly and truly, that persons do not sometimes die of bleeding after the operation of lithotomy. When the cutting gorget, as it sometimes does, divides the internal pudendal artery, if that misfortune be not attended to, the life of the patient becomes endangered from the chance of excessive hæmorrhage. The blunt gorget had, however, a counteracting disadvantage of so much consequence that its employment has been long since relinquished it was the impossibility of making an opening sufficiently large for the removal of a stone of even inconsiderable magnitude. Cheselden, whose success was so great, was in the habit of cutting into the bladder with a knife. In consequence of the very great reputation which Mr. Martineau, of Norwich, has acquired for his lithotomy operations, I wrote to him, and requested the favour of a description of his instruments; in the account, however, which he was so kind as to send me, it did not appear that they differed from those in common practice. Depend upon it, Gentlemen, that little deviations in instruments are over-rated and over-valued. The success of surgical operations arises rather from the manner in which the operations are conducted, than from any insignificant peculiarity, which the instrument may possess. Those surgeons who are ever constructing new instruments and altering old ones, you may rely upon it are deficient here (the learned Lecturer touched his forehead)—[*a laugh*]; such individuals appear rather to be *surgical instrument-makers* —than *scientific surgeons;* and in their ridiculous inventions betray a littleness of mind, which proves them to be totally incapable of achieving any thing that is important—any thing that can add to our store of useful knowledge. The less complicated your instruments are, and the fewer you employ, so much the better; your operations will be executed with greater ease and expertness, and will prove much more successful in their issue.

Sir Cæsar Hawkins added to the blunt gorget its cutting edge; this was certainly an

improvement; but if the instrument be too wide at the part where the prostate and bladder are divided, the internal pudendal artery will be in great danger of being divided, and this is an accident which you cannot too sedulously avoid.

The gorget that I am in the habit of using has its cutting edge continued only *part* of the way back, in consequence of which, I know the exact size of the opening that is made into the bladder, and it is an effectual safeguard against wounding the above artery. In using the gorget, great attention should be observed to prevent its slipping between the bladder and rectum; it is a most horrible accident, and most horrible in its consequences. In mentioning cases, Gentlemen, in this theatre, I wish you distinctly to understand, that I never refer my remarks to any particular case, unless I especially direct your attention to it, when my meaning cannot of course be misinterpreted. I am induced to make these observations at the present moment from a feeling that by possibility my words may be misapplied,—and that while alluding to the unfortunate occurrence of the gorget slipping between the bladder and rectum, that you may have imagined I was directing your notice towards the late unfortunate operation at Guy's, where the prostate was so enlarged that the stone could not be removed, and where it was supposed at the time that the gorget had not entered the bladder. The gentleman who performed that operation was ever most anxious to discharge his duty with ardour and with zeal; his honourable conduct, and gentlemanly deportment, caused him to be sincerely esteemed and respected by his colleagues, and his resignation from ill health to be deeply regretted by his brother surgeons.

If I were to be asked how many times I had known the accident of the gorget's slipping and passing between the bladder and rectum happen, I should say at least a dozen, and in each case the most lamentable and fatal consequences ensued; for the operator lays hold of the stone, bladder and all, the forceps slip, he lays hold of the stone again enclosed in the bladder, in the same manner, and thus continues to pull, bruise, and draw the bladder till at length the patient is carried back to his bed without the extrac-

tion of the stone. Violent inflammation supervenes from the violent bruising which the bladder receives, and in a few days the person is no more.

This untoward circumstance may be easily avoided, if you will be always sufficiently guarded to cut with your knife into the groove of the staff, then put your index finger nail into the groove, and keep it there until you feel its situation occupied by the beak of the gorget; be sure not to withdraw your finger until you are satisfied of this fact. Well, having placed the beak of the gorget in the groove, take hold of the handle of the staff in your left hand, and bring it towards you; at the same time, depress the staff so as to keep it decidedly within the bladder; when you bring forward and depress the handle of the staff, that is the moment for thrusting in the gorget, and this should be done in a direction upwards. Having satisfied yourselves that the gorget is in the bladder, withdraw the staff, and then along the hollow of the gorget introduce the forceps; be particularly cautious when you are introducing the forceps not to let the gorget recede, and so get out of the bladder; this frequently happens, and I will presently tell in what manner: it is a very awkward accident, and often leads to a great deal of difficulty in completing the latter part of the operation. I will now explain the mode in which it takes place. When the gorget is in the bladder, and you attempt to pass the forceps along its concave surface, their point becomes opposed by the prostate gland, and in using a little requisite force to get them into the bladder, if you are not very careful, the gorget will be withdrawn; the forceps consequently will not enter the bladder, and the stone, together with the bladder, will be embraced by the blades of the forceps in the distressing manner just now explained to you.

If, upon introducing the gorget, considerable hæmorrhage should arise, this, after the stone has been extracted, may be checked, and entirely stopped by keeping the patient cool, and by plugging the wound with sponge or lint; while there is any bleeding it would be highly impolitic to place the person in a warm bed, as the increased temperature would necessarily augment the disposition to hæmorrhage. Do not apply ligatures to the vessels on account of these bleedings, as they

often, under such circumstances, give rise to sloughings; you should not quit the patient until the flow of blood has ceased. If, therefore, you treat these bleedings properly in the manner now described to you, they will not be attended with danger to life from loss of blood, as the hæmorrhage can be easily checked by keeping the body cool, and by introducing into the wound a quantity of lint or sponge.

Well, the gorget having been pushed into the bladder, the next step will be to pass in the forceps: in doing this remember what I told you a few minutes since respecting the resistance of the prostate and the occasional escape of the gorget from the bladder before the forceps are in its cavity. Before withdrawing the gorget you should strike the stone with the forceps, which act will dispel all doubt as to their not having entered the bladder.

Forceps.

The ordinary lithotomy forceps have their bend, or joint, two-thirds of their way forward. If the stone should break, you are then to use flat forceps. If it be a soft stone, or a number of small ones, you may employ the scoop, or crochet. Having passed in this last instrument, and carried its point a little beyond the stone, you then pass in your finger to the farthest extremity of the instrument; the stone is then lodged between the point of the crotchet and your finger in the same way as it would have been between the blades of the forceps, had they been used. Well, so much for the operation of lithotomy, as performed with the gorget. Now then for that by the

Knife.

I do not like this instrument for the operation so well as I do the gorget, and I shall presently tell you why.

Another instrument for dividing the prostate and bladder has of late been used with success, in the lateral operation of lithotomy, it is called the *bistourie cachée*, it was invented by Cosme, a French surgeon, about one hundred years since; it consists of a knife, enclosed in a sheath, which, after being introduced into the bladder, and turned with its edge downwards and outwards, cuts its way out when withdrawn.

I was myself for some years in the habit of using a straight scalpel, the same kind of instrument as you have lately seen Mr. Tyrrell operate with, in this hospital. Mr. Thomas

Blizard is said to have improved this instrument by making its blade longer and more narrow; it may be an alteration for the better, for aught I know to the contrary, for I am never so wedded to any thing of my own as not to be fully aware that other people's productions may be far superior.

Now, that young people may be readily and successfully cut with a knife, I can fully testify, for, without vanity, I may say that my experience in the operation has been considerable; I have myself cut twenty-four individuals for the stone in the course of one year, partly in private, and partly in hospital practice, have used both the knife and gorget pretty extensively; and I should hold myself exceedingly culpable if I did not fairly and candidly communicate to you the unalloyed opinions which I now entertain:—well then, Gentlemen, I can tell you that the knife may be advantageously employed in children—in fact, you may cut a child with any thing, but not so old persons, in whom the prostate and bladder are often diseased, and all the parts extremely rigid: thus, upon such a prostate and bladder the knife makes scarcely any impression, and the opening through the prostate is exceedingly small; while, on the contrary, the external wound will be of considerable size, which may be accounted for from the obvious fact, that the force is greater near to the hand than at the point of the instrument, which is much farther from the moving power; you will consequently find, when you are performing the operation of lithotomy with the knife in old persons having diseased prostate and rigid bladder, that you will not be enabled to make an opening sufficient to admit of the calculus being extracted with that freedom which every scientific surgeon knows to be prudent. The danger in the operation consists in bruising the parts, and not in cutting them. Again, in deep perinei, when operating with the knife, you often think that the instrument has completely entered the bladder, when probably its point has scarcely reached the verumontanum: you get at a loss—are quite at sea, and cannot tell whether it has entered the bladder or not.

Well, Gentlemen, the result of my experience has convinced me that, in old persons, the knife is not so good an instrument as either the gorget or the *bistouric cachée;* but in

young people it may be used with perfect safety. I speak from what I have observed, and therefore speak confidently. I relinquished the use of the knife in the adult and old person, because it did not succeed; and I feel perfectly satisfied, if in the commencement of your career you should indiscriminately employ it, that in the end, like me, you will discontinue its use in grown persons, and adopt it only in operations for children.

Difficulties in the Operation.

A large calculus is a most serious obstacle to both the performance and success of lithotomy; it is a difficulty of a horrible nature; and, in consequence of the bruise which the neck of the bladder receives from the force necessary to be employed in its removal, generally proves mortal. There is no comparison in the danger arising from a number of small stones, compared with one large one: the small stones, if you are careful, can all be removed without doing any violence to the parts; but with a large one this is impossible.

Large stones, when connected with enlarged prostates, present difficulties much greater than when the gland is in a healthy condition. Here (*handing the specimen to a student*) is a preparation in which you have an opportunity of seeing the state of the parts under these circumstances. Operations on such patients are dangerous to the last degree;—it is scarcely possible that they can recover from them; and the surgeon often falls into disrepute, most undeservedly, who happens to have the misfortune to meet with such cases. Some practitioners tell you that these cases would be successful if they were properly treated.—These men are either fools or impostors, and the sooner they are kicked out of the profession the better. Such men pretend to uniform success—which claim, which pretension, to practitioners of experience and to men of honour, is only an exposure of their want of candour, and utter disregard of truth. I can assure you, Gentlemen, that you will be sometimes successful, and sometimes not; only take care to study your profession with assiduity—to discharge its duties with fidelity—the taunts of your enemies will not then annoy you, and your minds will be free from self-reproach. That which I teach you I know to be really true; I am no speculator; my arguments

are the superstructure of facts; my deductions are from cases and occurrences which I have myself observed. In the faithful discharge of my duty in this Theatre I am compelled to mention unfortunate as well as fortunate cases. I sometimes praise, and sometimes censure; but in neither do I ever exceed that boundary which would be incompatible with my own honour or your improvement. In detailing to you the errors into which surgeons have fallen, I execute a very unpleasant task—a task much more disagreeable now, from the publicity which my Lectures receive, than at any former period; but, as your pilot, it is my imperative obligation to warn you against those shoals and rocks which have foundered but too many of your predecessors. He who publishes the Lectures, however, cannot be too particular in his discretion with regard to publishing names, when those names are blended, as they sometimes are, with unfortunate cases.

Now I am upon this subject, I may as well tell you that I am acquainted with the *oratory* (*a loud laugh*) which has lately been exhibited here; and I can likewise inform you that you were interfering in a matter over which you can have no influence.—(*Much laughter.*)—As much has been said on this subject, I may as well state to you all that has transpired, as far as I am concerned respecting it. When I found, week after week, that my Lectures were published, and that consequently I was daily paragraphed in the newspapers, I called upon the Editor of THE LANCET, and told him that I was about to move for an injunction. He replied, "That will not be of any use." —(*Excessive laughter.*) Well, Gentlemen, in the end I told him if he omitted my name I should take no further steps in the matter. He promised to do so:—as far as I have seen he has fulfilled his promise; and, of course, I have fulfilled mine. Indeed, the lawyer's instructions to counsel have been this very day destroyed. —(*Applause and laughter.*)— Now, Gentlemen, though I did not regard the publication of my Lectures, I felt myself disgraced and degraded, by my name for ever appearing in the diurnal press. Not a paper could I see, but my name flourished in it in some form or other. This looked so much like quackery, so much like puffing, that I am unable to describe to you how much it

annoyed me. Although the publication of my Lectures exposes me to the critical ordeal of my professional brethren, yet I fear it not; I care not who may be made acquainted with the doctrines I advance, —the instructions I give,—the principles I inculcate, while in this Theatre. If they cannot withstand the test of criticism they are unfit for your guidance, and ought to be exploded. (*Great applause.*) Facts, and inevitable conclusions arising from those facts, compose these Lectures; therefore I am perfectly indifferent as to who publishes them, and equally indifferent who may be made acquainted with them; for I am positive they cannot be refuted. I am well aware that I shall be assailed by the abuse of scoundrels; that envy, disappointed malice, and foul ingratitude, will endeavour to vilify my name; but, Gentlemen, such base and puny efforts are beneath the serious consideration of an honourable mind, and I shall continue to treat them, as I ever have done, with scorn and contempt.

Having said thus much respecting the Lectures, I now deem it prudent, while I am on the subject, to state my opinion to you, with regard to the publication of operations; this practice, I candidly confess, appears to me to be fraught with great danger, and will, I suspect, prove destructive to the reputation of the rising generation of surgeons. Suppose a very young surgeon had performed the operation lately executed by myself in the other Hospital, and that it had terminated in death; suppose a young surgeon to be unfortunate for five or six operations in succession; would not the public, with one accord, exclaim, Good God! what a butcher this man is? Such, I fear, would be the general feeling; and the ruin—the absolute ruin of the operator—the unavoidable consequence. We must, I believe, hold a meeting of the surgeons, for the purpose of adopting some measure, by which, if possible, the system may be prevented. It is a practice to which I am opposed, and I will put it to the candour of any man, and ask if it be not calculated to produce much mischief? Believing this myself, it is a practice to which I certainly object. With regard to my lectures the case is different; I have a duty to perform in this theatre, and I have no objection for the whole world to be made acquainted with the manner in which it is discharged; (*vehe-*

ment applause.) I will here remark, however, that in consequence of the colloquial style in which my lectures are delivered, they are not in that respect calculated for publication.

Most unintentionally have I been led into this long digression; for I can assure you, when I entered the theatre, I had not the most distant idea of saying one word upon the subject on which I have just been addressing you; an accidental allusion to a case brought the affair to my recollection, and I have freely and openly divulged my opinions. *(Continued applause.)*

As the time is now so far advanced, I must leave the *difficulties* of the operation until we next meet.

I shall now proceed to show you the lateral operation, as performed with the gorget and knife, and will also show you the high operation above the pubes, as lately performed at St. George's Hospital. (A subject was now brought forward, and the legs having been placed in the proper position, the learned Lecturer said,) Now then for the lateral mode; I will perform it first with the knife, and then with the gorget. (The lecturer now went through both operations according to the detail given in the course of this lecture; he demonstrated most carefully each part to the Students as he proceeded, and thus addressed them.) The staff now resting on the stone, I begin by making an incision in the left side of the perinæum, commencing at the symphysis pubis, and carrying it downwards and outwards to midway between the anus and tuberosity of the ischium, the termination of the incision being, as you observe, opposite to the centre of the anus; this cut, having passed through the skin and fat, has exposed the accelerator urinæ. I now divide that muscle between the bulb of the penis and left crus; and then with my fingers press the bulb under the right ramus of the ischium, to prevent its being wounded. I now divide the transversus perinæi, and feel with the left index finger for the groove of the staff. I now cut into the groove at the membranous part of the urethra, and bringing down the handle of the staff, I push the knife forward into the bladder, and then cut through the prostate gland, and the neck of the urinary organ downwards and outwards, corresponding to the external wound. I again pass

my finger into the wound, and feel for the groove of the staff; this instrument must now be withdrawn. I keep my finger in the bladder, and pass in the forceps with their flat side next to it; having with the forceps carefully felt for, and satisfied myself of, the situation of the calculus, I grasp it within the blades, and thus withdraw it. All the first part of the operation with the gorget is the same as that with the knife; the staff being introduced, and the opening into the groove through the membranous part of the urethra having been completed, as you here see it, I fix the beak of the gorget in the groove, and bringing the handle of the staff towards me, I at the same moment push the gorget into the bladder with its point directed with a considerable inclination upwards; the staff is then withdrawn, and the forceps being passed into the bladder, along the hollow of the gorget, you remove the latter instrument, and extract the stone as before.

The High Operation, as used in France, and now occasionally adopted in St. George's Hospital.

The instruments employed in this operation are a probe-pointed bistoury, the *sonde-à-dard*, (a sound containing within it a dart or stilet,) and a pair of forceps similar to those I have just been using. Sir Everard Home has attached a net to one side of the forceps, as you here see it, so that when they are introduced into the bladder, you are to *fish* for the stone. (*A laugh.*)

Well, I now pass into the bladder this *sonde-à-dard*, and by depressing the handle, endeavour to make its point project just above the symphysis pubis, in a line with it and the linea alba—I now force on the stilet, and in this situation it makes its appearance. An incision must now be made about two inches in length in the direction of the linea alba, through the integuments down to the bladder, which is supported against the part by the point of the sound; and then, with the probe-pointed bistoury, make an opening into the bladder of the same size as the external wound. I now with the point of my finger hold the bladder against the edge of the wound, withdraw the *sonde*, pass down the forceps, and thus remove the stone. It is very easy, Gentlemen; but I have seen quiet enough of this operation.

A French surgeon, some time

since, finding that a calculus was too large to be extracted by the lateral operation, immediately performed the high operation; he made a tolerably free incision, and upon seeing something he did not expect, exclaimed, "*Mon Dieu! voilà l'intestin!*" After some difficulty, the intestines were returned, and the Frenchman very coolly asked an English surgeon, who was standing by him, how long he thought the patient would survive? He received for answer, "Probably forty-eight hours." "*Oh non!*" said the operator, "*vingt-quatre au plus,*" and truly the Frenchman was right, for at the end of twenty-four hours the patient was dead.

It has lately been proposed to remove stones from the bladder, by performing the

Operation of Lithotomy through the Rectum.

It is recommended, Gentlemen, because it is simple—because it can be easily done; but notwithstanding this, I can tell you that it is a dangerous operation. I have known it performed but in two instances,—one patient died from inflammation of the rectum—and the other recovered, but with the dreadful misfortune of having a fistulous communication between the rectum and bladder. Be upon your guard respecting these pretty little—easy—simple operations; do not be misled by adopting them. Always reflect upon the nature of the parts on which you are going to operate, steadily keep your eye on the ultimate success of your cases—not upon the applause you may derive from the neatness or facility with which your operations are accomplished; and ever bear in mind, that upon the successful issue of your operations will your reputation depend.

LECTURE XLI.

Before I showed you the operation for stone in the last Lecture, I was speaking of the difficulties which arise in the extraction of stones from various circumstances; as, for example, where the stone is excessively large, or where the perinæum is very deep. A deep perinæum is a great obstacle; the distance of the bladder from the external parts throws great difficulties in the way of the operation. The force which it is necessary to employ in such cases is often so great as to lead to the destruction of life. When a

stone of considerable magnitude is accompanied with an enlargement of the prostate gland, the patient rarely recovers from the operation. A number of small calculi in such cases is of less importance, but a large stone, accompanied with an enlarged prostate, generally leads to a fatal result. Mr. Henry Earle has constructed an instrument, for the purpose of breaking large stones in the bladder by means of a perforating screw. I have not had an opportunity of making use of it; but it appears to me to be well constructed for that purpose, and very likely to succeed. It is undoubtedly a very desirable thing to break stones, in cases either of a deep perinæum, or an enlarged prostate, and the invention of such an instrument cannot but be advantageous to the profession. When I say that cases of large stone, accompanied with enlargement of the prostate gland, generally terminate unfavourably, I do not mean to be understood that the enlarged prostate necessarily leads to the destruction of life, but the patient very rarely recovers his health perfectly afterwards, so as to be free from the symptoms of the disease.—Patients under these circumstances generally suffer very much from the enlargement of the prostate after the stone is removed. I remember a curious case of a French gentleman who was operated upon for stone by Mr. Cline, senior. Mr. Cline happened to take out his watch, and to make some indifferent observation; the patient, however, thought he said that it was dinner-time. He recovered from the operation, but as he still suffered occasionally from symptoms of stone, instead of being grateful for having been relieved by the operation, he used constantly to say that Mr. Cline was in a hurry for his dinner, when he performed the operation, and had left a stone in his bladder. This gentleman died some time after, and left five guineas to myself, or any other surgeon, except Mr. Cline, to examine his bladder after death, for the purpose of ascertaining whether a stone had not been left there. I happened to be out of town at the time, but Mr. Ramsden, who was then surgeon at St. Bartholomew's Hospital, on examining the body, found that the stone had been completely removed, but that the gorget on entering the bladder had nearly separated a small portion of the prostate gland,

so that a little valve was formed on the inner side of the bladder, which fell occasionally over the beginning of the urethra, when the patient attempted to make water. When this happened, he was under the necessity of remitting the attempt to discharge his urine, and suffered great pain. I shall send round the preparation, in which you will see the portion of the prostate nearly separated by the gorget.

It not unfrequently happens that a cyst is formed in the bladder, in which the stone is either partially or entirely contained. If the cyst includes the stone entirely, the symptoms of stone cease. It happened very fortunately for the person who obtained the reward from Parliament, for discovering a medicine capable of dissolving stone in the bladder, that he gave his medicine to a person in whose bladder a cyst of this kind formed. It was fully established that a stone had been distinctly felt by some of the most eminent surgeons in the metropolis, before this person took the medicine; and after he had taken the medicine for some time, the stone could no longer be felt. On examination of the body after death, however, it appeared that the stone had escaped into a cyst, by which it was completely enclosed, so that it no longer produced any irritation in the bladder. There is a preparation on the table, which will illustrate the appearance of such a cyst, the mucous membrane passing between the muscular fibres, and forming a cavity through the coats of the bladder large enough to admit the stone. When the stone is partly in the cyst, and partly in the bladder, you may sometimes open the cyst, and remove the stone without opening the bladder. An example of this occurred lately in a child at the other hospital, who had slight symptoms of stone. On sounding the child, I felt a stone, but as it did not give the usual impression to the sound, I passed my finger into the rectum, and felt the stone confined in a bag above it. On raising the stone with my finger, it struck firmly against the sound. I did not open the bladder in this case, but passing my finger into the rectum, and carrying a knife through the perinæum above the rectum, I opened the cyst, and extracted the stone from it. The child did not pass its urine through the opening after the first day, and the wound healed very readily. I have seen Mr. Chandler extract a

stone from a cyst in a child, by means of a probe-pointed bistoury; he dilated the mouth of the cyst, so as to be enabled afterwards to extract the stone. In general, cysts in the bladder containing stones are connected with an enlarged state of the prostate gland.

There is a preparation illustrating this state, which was taken from a patient who died from the operation in the other hospital. The repeated attempts which were made to extract the stone, which did not succeed till after a great length of time, produced great irritation, and ultimately ulceration of the bladder, which led to the destruction of life. A great number of small stones, to the amount of thirty, forty, or more, are sometimes found lodged in a cyst, situated behind the prostate gland. There is a practical point which ought not to escape my attention or yours; and that is, that the bladder sometimes undergoes a partial contraction, so that the stone is completely embraced by it. Here is an example taken from a child, which died from this cause at the other hospital when I was an apprentice; there is another example of this partial contraction of the bladder in the collection. The way in which it happens is this:—Surgeons are generally anxious to allow the patient to retain a considerable quantity of urine in his bladder in order that the sudden gush of water, on the introduction of the gorget, may inform them that the instrument has reached the bladder. This practice is, however, wrong; because, when the patient is allowed to retain a considerable quantity of urine, the bladder suddenly contracts, when it is discharged, and so firmly embraces the stone, that when you introduce the forceps there is no space between the bladder and the stone, and the instrument constantly slips from the stone. In this way the patient is often exhausted by the repeated attempts to extract the stone. I once saw a patient of Mr. Travers under these circumstances, though he afterwards recovered from the operation. I have no doubt he well remembers the case to which I allude; immediately after the gush of urine, the bladder contracted at its fundus, and the forceps slipped repeatedly from the stone, in the manner which I have described. Soft stones require the use of the scoop; a number of calculi will require either the frequent introduction of the forceps, or the use of the scoop. I do not recollect

that there is any other circumstance which I need mention to you respecting the lateral operation for stone.

After-Treatment.

With respect to the after-treatment, some surgeons inject the bladder, with a view of removing every remaining fragment of stone. This is not the practice in these hospitals, and I am by no means satisfied that it is of any use. It might have been necessary when dressings were applied to the wound, but this is never done now; the wound is left open, so that the urine may distil as freely as possible. In this way any remaining portion of calculous matter is carried away, and there is no danger of its accumulating in the bladder. The after-treatment consists in giving the patient opium as soon as the operation is over; indeed, in some cases, where the patient is exceedingly irritable, I give opium two or three hours before the operation is performed. I do this with two views; first, because the opium deadens the sensations of the patient, and he suffers much less pain from the operation; and secondly, because it renders him much less irritable after the operation. The patient often falls into a composed and tranquil sleep in consequence of the opium, instead of rolling about the bed in an irritable state. The opium, therefore, acts beneficially, by diminishing immediate and remote irritability, and I have never found it produce any improper effect. It will be proper to give diluents very freely to the patient; a small quantity of soda or potass should be put in his diluted drink; gum may also be added, as it is believed to have the power of soothing the parts, and diminishing the irritating quality of the urine. Whether it have that effect or not is doubtful; but it is generally believed to have some influence in this way. The danger after the operation for stone, is that of peritoneal inflammation. On the day after the operation, therefore, you should put your hand on the lower part of the patient's abdomen, and inquire whether he feels any pain. If there is any tenderness of the peritoneum, you should apply leeches to the abdomen, and foment it; it will be often necessary to take away blood, and to put the patient in a warm bath, if the symptoms should be urgent; vomiting is a frequent symptom, when the abdomen of the patient is in a tense state. The subsequent treatment will consist in giving

considerable doses of the submuriate of mercury. Calomel is a very useful medicine in this case, not only as a purgative, but because, combined with opium, it diminishes irritability, and lessens the disposition to inflammation in the abdomen. Purgatives and anodyne injections should also be administered. The time in which a patient recovers is generally from seventeen to twenty-one days, under favourable circumstances. It is sometimes longer, when the perinæum is deep; on the other hand, I have known a patient to be well in a fortnight after the operation. The urine frequently passes in the right course in about twenty-four hours after the operation; sometimes, however, not till after three or four days; this will depend, in a great measure, on the size of the stone. In general, the patient has a rigor, when the urine returns to its natural course; you need not, therefore, be alarmed at this symptom.

Of Stones in the Urethra.

When a stone is lodged in the urethra, it is found in three situations; I will endeavour to explain to you the difference of treatment required, according to the situation in which the stone is found. When you find a stone in the urethra, it will be in vain to attempt to extract it with the forceps; even when it is felt very near the orifice of the urethra, or when you can see it by opening the orifice, you can very rarely succeed in extracting it with the forceps. There are three situations in which a stone is found lodged in the urethra: first, in the perinæum; secondly, opposite the scrotum; and thirdly, opposite the frænum. When it is lodged in the perinæum, and the patient is labouring under retention of urine from that cause, be very much on your guard not to displace it from its situation, or thrust it back towards the bladder, as you will be in danger of subjecting the patient to the necessity of afterwards submitting to the operation for lithotomy. What you should do is to pass the largest-sized bougie into the passage, so as to reach the anterior extremity of the stone; you should then tie the bougie to the penis, so that the urine may not escape by the side, and let it remain for a considerable time in the urethra. The patient will have an urgent desire to make water, but you must desire him not to attempt to pass his urine until you give him permission to do so When the urgency to

make water is so extreme that the patient can no longer endure it, untie the bougie from the penis; and as soon as it is withdrawn the urine accumulated behind the stone will gush forward, and the stone will generally pass into the vessel into which the patient discharges his urine. In this way you will generally succeed in getting rid of extraneous bodies from that part of the urethra. I have known a bougie remain four hours in the urethra, before the distress arising from the accumulation of urine was sufficient to justify the propriety of withdrawing it. The second situation in which stones are found in the urethra is opposite the scrotum. In this situation they sometimes prove fatal. There is a preparation on the table taken from a child, which died from this cause: the scrotum in this case was extremely enlarged and reddened: the perinæum was also inflamed, and gangrene took place, which led to the destruction of life. When the stone is lodged opposite the scrotum, there is danger of the urethra giving way, and the urine escaping into the cellular tissue. When you have ascertained by the probe that the stone is in this situation, you must endeavour to push it about an inch behind the scrotum, where you should make your incision. It is wrong to make the incision through the scrotum itself, if you can avoid it; but if you are obliged to do so, in consequence of your being unable to push back the stone, make the opening as large as possible, so that the water may pass with great freedom through the cellular tissue, and escape externally. The third situation in which stones are lodged in the urethra is opposite the frænum, where it will be necessary to adopt a different plan. I have told you that you can very rarely succeed in extracting them with the forceps; what you must do is to curve the end of a probe as much as possible; pass it down the urethra beyond the stone; and then withdrawing it, you will generally succeed in extracting the stone. The reason why you cannot extract it with the forceps is, that when you try to bring the forceps forward, you pull the urethra back on the stone, and consequently you do not move the stone itself. I once had a pair of forceps constructed similar to those used in midwifery, of which the two blades were separately introduced into the urethra, and afterwards locked externally.

The probe, however, is most easily introduced; if there should be great resistance, you may enlarge the urethra a little with the knife at the frænum. A curious case occurred the other day, in which I extracted two calculi from a man's urethra. I did not know that I had such an operation to perform, and therefore I had no opportunity of giving you previous information of it. The man was suffering under retention of urine from stricture; I did not know that I was to meet with calculi, but the way in which I operated was this:—I passed a sound, or staff, into the urethra, down to the stricture, and instead of turning it towards the bladder, I turned the point of the instrument towards the perinæum, so that the urethra was quite prominent towards me. I made a cut in the course of the urethra, a little below the instrument, and finding something very hard there, which I believed to be stone, I extended the cut and found a stone. I then divided the urethra to a considerable extent, and a stone larger than a three-ounce grape-shot passed through the opening. When I had removed this, a smaller stone made its appearance. This stone was lodged in a cup in the upper part of the larger stone. The appearance of the stones, which were completely locked and fitted to each other, was extremely beautiful. The next step was to put the patient in a situation to have a catheter passed. I pushed the sound onward through the strictured part; and having cut the part with a knife, I introduced my finger into the wound, and carried it into the bladder. A similar case occurred to me in a former period of my life; the form of the stone was exactly the same, and the treatment I pursued very much the same as I have just described.

Of Stones in the Prostate Gland.

Stones in the prostate gland differ in composition from those in the bladder: they consist of phosphate of lime. There are two species of calculi in the prostate; those which pass from the bladder in consequence of ulceration, and those which are found in the cyst formed in the prostate gland itself. There is a preparation on the table, in which three calculi are seen lodged in the prostate, in consequence of ulceration opening from the bladder, and another in which there is a number of calculi contained in a cyst formed in the pros-

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tate. Calculi in the prostate gland may be readily detected by introducing your finger into the rectum. I was once sent for by a Mr. Vaux to a gentleman who was the subject of retention of urine. I introduced a catheter to what was supposed to have been a stricture, but I felt the instrument pass over a calculus; I put my finger into the rectum, to ascertain where the stone was, and pressing upon the prostate gland, I felt the stone just above it. It afterwards appeared that there were three calculi in his prostate gland. I told him he might be immediately relieved by suffering me to make an incision in perinæo; but he was a timid man, and would not consent to the operation. He lived for some years after, was occasionally the subject of retention of urine, and died miserably from the effects of the disease on his kidney. He foolishly chose to die a painful death, when he might have been easily relieved by a slight operation.

I recently had an elderly gentleman under my care who had an enormous number of calculi in his prostate gland. I do not know how many I removed from him, and if I did, I should scarcely venture to say how many. A bottle full of calculi taken from this gentleman has been preserved. They were not of course of a large size. I did not open the bladder in this case, but having introduced a staff into the bladder, I made an incision in the perinæum towards the prostate gland, and putting my finger into one lobe of it, I found a quarry of calculi. I removed some of them with my finger, and some with a small pair of dressing forceps. I then opened the other lobe, and extracted a number of stones which were embedded in it. I have since had occasion to see this gentleman, and again removed a number of calculi from his prostate gland. It may be said that there is a little difficulty in the operation of opening the prostate gland, but a man who is acquainted with the anatomy of the parts, and who has studied his profession, will never talk of difficulty; and if he is not well acquainted with the anatomy of the parts, he ought not to touch the human body as a surgeon. I have heard it observed, that to make an opening into the urethra is a difficult operation.—Ridiculous! A man who has studied his profession, and dissected the human body, ought to be flogged, if he cannot open the

urethra with the greatest ease. I shall now proceed to

Operation for Stone in the Female.

And I here am a little afraid of my friend, for I shall have occasion to mention some odd stories. (*A laugh.*) Calculi form as readily in the female as in the male; but the female is much less frequently the subject of the operation of lithotomy, in consequence of the shortness of the meatus urinarius, and the ease with which stones pass away from it. I think the symptoms of stone in the female are more urgent than those in the male. It is horrible to witness the suffering which a woman experiences in consequence of this disease. She has a dreadful pain at the extremity of the meatus urinarius, and in addition to this there is a forcing down of all the lower parts of the pelvis, as if they were about to protrude; a frequent disposition to make water; and all the pains suffered during delivery. There is generally a prolapsus uteri, and a discharge of bloody urine. In addition to these symptoms, there is almost constantly an incontinence of urine; a great urgency to discharge it, and an incapacity to retain it. The constant excoriation of the parts from this cause keeps the patient in a most offensive state.—There is some variety as to the situation in which stones are found in the female; they are sometimes lodged in the urethra and vagina. A curious instance of this kind happened to my old friend Mr. Cline, who took me, when I was an apprentice, to the first operation for stone in the female which I witnessed. In this case he felt a stone just at the beginning of the meatus urinarius at the neck of the bladder, and on passing his finger into the vagina he found a portion of stone in that situation. He removed the portion of stone from the vagina, and then dilating the meatus urinarius with the gorget, he extracted the other portion of stone. The two portions formed a sort of chain-shot, a bar between the urethra and vagina communicating between them. You must be upon your guard, however, Gentlemen, against imposition in the female; for extraneous bodies often find their way into the meatus urinarius of the female in a very extraordinary manner*. Stones of very consi-

* Hic multos casus prorsus singulares Professor illustrissimus lepidè

derable size will pass by the meatus urinarius in the female, without the necessity of performing an operation. Here is a specimen of a large stone which passed from a patient of Mr. Giraud, a surgeon of great respectability. The patient had suffered for a length of time from this stone; when one night, on getting out of bed and discharging her urine, she heard something fall into the vessel, and on a light being brought, this stone was found to have passed. Mr. Headington had a patient from whom a much larger stone had passed in the same way. Stones may be removed from the female either by dilating the meatus urinarius or by lithotomy. The extraction by dilatation is, however, greatly to be preferred, not only because there is much less danger in it, but because it does not leave behind the melancholy consequences of lithotomy in the female, I mean, the loss of the retention of urine. A woman, who undergoes the operation for stone, generally loses, for ever after, the power of retaining her urine. Her condition, therefore, is most deplorable; the constant discharge of urine, and the constant excoriation of the parts, render her offensive to all around her; her health is broken, and she is completely cut off from all society.

The learned professor proceeded to perform on the dead subject the operation of dilating the meatus urinarius, and extracting the stone from the bladder of the female. The forceps employed for this purpose was an instrument constructed upon his own suggestion, by Mr. Weiss—a gentleman, observed the learned Professor, whose ingenuity enables him to avail himself of the slightest hint, and to produce mechanical contrivances admirably adapted to the purposes for which they may be suggested.

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enarravit, quos tamen in lucem proferre haud decet, non quia hujusmodi facta studiosæ juventuti utilissima in nostro opere supprimi debent, sed quia diurni preli scriptores ex nostris paginis quædam medicis scitu dignissima, sed oculis vulgi, præsertim fœminarum subjici parum apta, excerpere solent. Absit nobis pravis lectorum appetentiis, lenocinandi cupido, quidquid de hac re insulsissimus ille vir, Johnsonus peritura charta inepte scriptitaverit. Fas sit nobis saltem studiosos medicinæ admonere, carbones, clavos seneos, dentiscalpia, multaque varii generis instrumenta aliquando in meatum urinarium vaginamque fœminarum irrepsisse, an propter insolitam puellarum lubricitatem, an propter incredibilem operationem chirurgicam subeundi cupidinem haud satis constat.

MEDICAL REVIEW.

Plate I. forming part of a Series of Engravings, designed as Practical Illustrations of the Surgical Anatomy of the Blood-vessels, Nerves, &c., relating to Amputation. By. THOMAS ALLCOCK, *Esq. Surgeon. Burgess and Hill, London.*

The Engraving before us is the first of a series, in which it is intended to give an accurate view of all the important parts which are exposed in the different amputations of the human body. The object of these representations is to afford the surgeon the means of acquiring a knowledge of the precise situation of these parts, or, at least, to give him an opportunity in every instance of refreshing that knowledge at the very moment when it is of essential importance that he should possess it. The plates are not designed to supersede the necessity of dissection, but they are chiefly intended to assist the surgeon in recalling to mind, at the time of an operation, the relative situation of parts which it is often necessary, for the patient's welfare, should be discovered as soon as possible after the removal of a limb. It will be said that the flow of blood will enable the operator to find the arteries, but he who trusts to this alone will find himself greatly perplexed; the smaller arteries contract immediately on being divided, and then lie buried and concealed in the surrounding parts; and unless the surgeon is acquainted with their natural situations, his patient will be exposed to the danger of being kept a long time under the operation, and of having parts included in the ligatures which ought most carefully to be avoided. Of the utility then of this undertaking there cannot be the least doubt, and we know of no engravings on the same principle as the one before us ever having been published. A few years ago some lithographic plates, by Maingault, on the same plan as this, were published at Paris, but the indistinctness with which the parts are represented, renders them nearly useless.

This plate represents a transverse section of the right leg, one-third the length of the tibia from its upper end. The leg is supported by a rail, with the face of the stump turned forwards in the position it is usually presented in amputation, when the arteries are to be secured. The knee and upper part of the leg are but little seen, being fore-shortened to give a fuller view of the face of the stump. There is an outline also with references to the different parts represented in the engraving. The bones, muscles, arteries, nerves, &c., are all distinctly marked, and the whole appears to be a faithful representation from nature. The plate is coloured, which gives it the appearance of a highly-finished drawing.

Plates of this description, we are convinced, will be found highly useful to every surgeon; to those who are engaged in

active practice, as well as those who have occasion less frequently to use the knife—but to surgeons who reside in the country, and have not the means of keeping up their anatomical knowledge, they must prove invaluable. Mr. Allcock will confer a service on the profession at large, by the publication of the plates which he has just begun, provided the merits of each be equal to those of the first. The plate before us is evidently the production of one who is both an able artist and a good anatomist. From what we have said, our readers will see that we conceive this engraving entitled to the attention of every surgeon, and we sincerely hope that the undertaking will meet with the success which it so well deserves.

ST. THOMAS'S HOSPITAL.

Friday, March 19th.

Henry Prince was admitted into this hospital on the 4th of November, having every symptom of stone in the bladder. Shortly after the child's admission, Mr. Beck, one of Mr. Travers's dressers, extracted a small calculus from opposite the frænum. Subsequently an abscess formed in the urethra, behind the scrotum; and five days after it had been opened, another triple phosphate calculus was removed from this part of the urethra. The wound which had been produced healed kindly, and the urethra apparently was quite free from disease. Notwithstanding, however, the removal of these calculi, the symptoms of stone obstinately continued to distress this suffering infant. There were severe pains in the loins, cutting pain at the extremity of the penis, and a frequent discharge of bloody urine; the flow of urine would also be suddenly checked as perfectly as if the urethra had been plugged by means of a cork. In consequence of these symptoms the child was several times sounded by the surgeons, and a calculus felt; at length it was finally determined that the operation of lithotomy should be performed, which was executed by Mr. Travers. The stone could not be found; it was the next morning discovered, however, by the nurse, in a clot of blood mixed with the sand on the floor! It was an exceedingly small calculus, scarcely as large as a garden pea, of an oblong figure, and was of the triple phosphate kind, the lamellæ being readily distinguishable, in consequence of its side having been chipped when in the act of sounding. After the operation Mr. Travers addressed the assembled students to the following effect:—

"Gentlemen,—This is one of those unfortunate cases in which, after the first step of the operation has been completed, no stone can be found. I have, however, the satisfaction of stating that my colleagues, if deceived, have been all equally so with myself. It

is an extraordinary circumstance; and the only way in which it can be explained is the presumption that it was an exceedingly small calculus, and passed off with the gush of urine when the gorget entered the bladder.

"This presumption is further strengthened by the fact of there having been, at different periods, two small calculi extracted from this child's urethra, thereby shewing an evident disposition of the bladder to form such calculi.

"Similar cases, Gentlemen, have happened before; it is right that you should be acquainted with them, and I have not the slightest wish to conceal the particulars of the case from you."

Experiments on Animals with the Acetate of Morphine.

Mons. Magendie has established by experiments that morphine, dissolved in oil, or, which is better, combined with the acids, forms exclusively the narcotic part of opium.

Mons. Orfila has frequently given the acetate of morphine to dogs, in doses of from 6 to 12 grains. He has always observed symptoms similar to those produced by poisoning from opium, especially the dilatation of the pupils; on examining the digestive canal after death, he has observed no trace of inflammation.

M. Segalas gave the acetate of morphine to eight dogs: it only produced copious vomiting. On tying the œsophagus of a dog, after having injected this poison, the animal merely dozed a little, and no vomiting being produced, shortly after died.

M. Martin Solar gave to a dog 12 grains of the acetate of morphine, which merely produced immediate vomiting.

MM. Dupuy, Deguise, and Leuret, have just published the following account of some experiments made with the acetate of morphine on cats:—

Exp. I.—We injected into the œsophagus of a large cat 5 grains of the acetate of morphine, dissolved in an ounce of water, to which we added a few drops of acetic acid. The animal almost immediately vomited half of the mixture. At the end of *two minutes*, it seemed to feel general uneasiness, the pupil dilated, convulsions in all parts of the body succeeded, and there was a little froth at the mouth. In *fifteen minutes*, the dilatation of the pupil had increased; sight weak; pulsations of the heart hurried and irregular; those of the arteries often imperceptible; continued trembling; state of torpor. In *thirty minutes*, the heart beat somewhat less rapidly, and the animal appeared a little roused. In *forty minutes*, frequent convulsions of the extremities came on. In *one hour*, the convulsions became more general and frequent, resembling the effects of the poison of strychnine; they were followed by relaxation. In an *hour and forty-five minutes*, convulsions stronger,

pupils capable of contraction, extremities almost entirely paralyzed. Shortly after the convulsions returned with fresh intensity; and the animal, in its struggles, succeeded in extricating itself from the lists with which its foot was confined, and escaped. We found it again two days after perfectly recovered.

Exp. II.—We injected 10 grains of the acetate of morphine, dissolved in an ounce of water, into the œsophagus of the same cat which was the subject of the last experiment, and which immediately vomited a fourth part of it. In *two minutes*, its throat was filled with a white froth. In *five minutes*, the pupils contracted strongly at very short intervals. In *ten minutes*, it had some spasmodic motions. In *fifteen minutes*, it shewed terror at the slightest noise; the heart beat quickly and irregularly. In *twenty minutes*, there was laborious respiration, masticating motion of the jaws. In *thirty minutes*, pupils dilated, but capable of contraction. In *forty-five minutes*, general convulsions. In *one hour*, the animal laid down and tried to repose its head, but whenever its head touched the ground it immediately jerked it up. Pupils closed, pulsations of the heart strong and irregular. In *one hour and thirty minutes*, it had two copious liquid evacuations of an insupportable fœtor. In an *hour and forty-five minutes*, the animal yawned, pulsations of the heart strong, but not frequent; those of the arteries concentrated. At the end of *two hours*, as we wished to get some blood for the purpose of examining it, we made a transverse incision at the place where we felt the right femoral artery; not a drop of blood flowed, and the animal did not appear to be sensible of the operation. Astonished at this circumstance, we amputated the thigh, in order to ascertain that the femoral artery was opened, and still we obtained no blood. We proceeded to open the carotid arteries, and we were not certain of having obtained our object till the bistoury was stopped by the vertebral column; only a small quantity of blood flowed from the wound, equal in volume to three ounces of water, very thick, not having the red colour of arterial blood, and drying immediately on the plate which contained it. Before this last operation we were convinced not only that the animal was still alive, but that it was in the same state as before the first. All the parts of the body, examined with the greatest possible care, exhibited not the least alteration, the meninges only appeared to have a little more blood than natural.

Exp. III.—We gave five grains of the acetate of morphine to a cat aged two or three months, which immediately vomited a small quantity of it. In *two minutes*, there was universal tremor, especially in the extremities. In

six minutes, slight torpor, pulsations of the heart strong and slow. In *ten minutes*, the pulsations were more frequent; temperature of the body increased; in *fifteen*, anxiety, weakness in the extremities, sight feeble; in *eighteen*, violent shiverings; the animal ran as if intoxicated, and struck its head against the wall; laborious respiration. In *twenty minutes*, the animal dragged its belly along the ground; sometimes rose, and fell immediately on its left side; the heart beat feebly; temperature of the body became natural. In *twenty-four minutes*, complete torpor; bruises and deep incisions could not rouse the animal. In *thirty-six minutes*, pulsations of the heart very quick; at the end of *forty minutes*, we made a deep transverse incision in the neck, during which the animal showed no sign of pain; about one ounce of red and dark-coloured blood flowed from the wound; it coagulated immediately; there was very little serum at the end of two days, and no acetate of morphine could be detected in its analysis. The internal membrane of the stomach was slightly reddened towards the pylorus, and contained about a drachm of liquid mixed with some clots of milk which was slightly acid, and in which we recognised the acetate, not capable of crystallization, as in another experiment. We found nothing remarkable in the intestines; the bladder was distended with urine; the cerebrum, cerebellum, medulla oblongata, and spinal marrow, so far from being injected, appeared colourless. The authors conclude from these experiments,

1st. What is the effect of the acetate of morphine on the mucous membrane of the stomach? We have proved that this substance produces no visible alteration.

2ndly. Can the poison be recognised in the digestive canal? We have found it several times in the stomach, but not hitherto in the intestines.

3rdly. Does the blood undergo any alteration, and can any traces of the poison absorbed be found in it by chemical re-agents? Our researches on this point have hitherto been unsuccessful. We found the temperature of the blood much below its natural state in a dog which was on the point of expiring, while it was extremely thick in a cat, to which the acetate of morphine had been given only two hours before. In all these cases, the blood was in very small quantities.

In addition to these experiments made upon dogs and cats, we must mention those made upon the horse, by M. Barthelemy, who read the details and results of these experiments, a few days ago, to the Royal Academy of Medicine. From what we can collect from this paper, it appears

that enormous doses of acetate of morphine have been swallowed by several horses, without any other effect than a little alarm, and a marked dilatation of the pupils, which disappeared at the end of a few hours; the dose in these cases was nevertheless carried as far as two drachms, or even half an ounce. In order to produce mortal, or even sensible, effects on the horse, the poison must be injected into the veins; the phenomena then produced resemble those which result from nux vomica.

We shall speak of the experiments made on men in our next number.

Gazette de Santé, Feb. 15, 1821.

LECTURE XLII.

THE subject with which I propose to occupy your attention this evening, is the diseases of the breast; but before I proceed to them, I have a few words to say to you on calculi in the submaxillary duct.

Calculi in the Submaxillary Duct.

Stones are occasionally found in the duct of the submaxillary gland, and produce irritation, the cause of which is unintelligible to the patient, and often not distinguished by the surgeon. The unpleasant feelings produced by stones in this part occur at and after meals; the stones arrest the progress of the saliva, and produce irritation of the surrounding muscles; a swelling forms at the orifice of the duct; day after day the swelling returns, and at last the patient puts his finger along the side of the tongue, feels something hard there, and by this means it is discovered that there is a stone in the submaxillary duct, which has produced the accumulation of saliva, and given rise to the irritation experienced by the patient. Sometimes a small channel is formed through the stone, which allows of the escape of the saliva; but in all cases the degree of irritation depends on the retention of the saliva. A gentleman with whom I formerly lived had a stone in his submaxillary duct, and he used to say to me that he had a curious sensation in his mylo-hyoideus muscle, a spasm of that muscle; this continued for weeks and months; but one day he sent for me, and said that he had discovered the cause of the irritation that he had so long felt in the mylo-hyoideus muscle; that it was a stone formed in the submaxillary duct; he requested me to take it out for him, which I did. With respect to the

operation required for the removal of stones from this part —you must place your finger under the jaw, and press against the gland; an assistant holds the cheek on one side, so as to bring it as far as possible to the ear; you then perceive the duct under the tongue; you raise the duct and tongue, and feel for the stone, and having discovered it, you elevate the cyst, and with a cataract knife cut on the stone, and then with the end of a hook you pull it out; it is very easily removed, and there is no danger of wounding any vessels, supposing you press the duct towards the mouth; if you omit this, you may wound some artery, and have troublesome hæmorrhage; raise then the duct as much as you possibly can in performing this operation.

We now come to the diseases of the breast.

You find the breast subject to cancerous affections, and others of a different character; some that are not dangerous to life, though they require an operation for their cure,—others that are not dangerous, and do not require an operation,—and you find it also subject to some diseases which, with an operation or any other means that you may try, generally terminate unsuccessfully. We shall first speak of the

Hydatid, or encysted Swelling of the Breast.

The breast is liable to the formation of a swelling, which is at first hard, and afterwards passes into the fluid state, called the hydatid, or encysted swelling of the breast; it consists of numerous cysts containing water, as in hydatids or cysts, that are found in any other part of the body. There are but two species of this complaint—the one which contains a fluid, like serum in cells,—the other a globular hydatid, such as is found in the liver and other parts of the body; in the breast this kind of hydatid is occasionally found. The hydatid swelling at the beginning is of a solid feel, and I know of no mark which distinguishes it in this state from that of chronic inflammation of the breast, or such as is produced by the retention of milk. Now and then, although it is exceedingly rare, I have seen at the commencement a number of little swellings, resembling peas in size, and containing water; however, in general there is no diagnostic mark at the onset, between this affection and the state produced by common inflammation of the

breast. There is no pain in the part, except just prior to menstruation, when it becomes painful; at other times pain is absent. After the swelling has continued some little time, without any feeling of fluctuation in it, it may be divided into a solid and fluid part, and on putting the hand on it, you are able to say, "Here it is solid, there fluid," but all this time it is wholly unattended with pain. Another circumstance deserving attention is, that the skin is quite free from discoloration, excepting a little prior to ulceration, when the part about to ulcerate changes colour. The complaint is entirely unaccompanied with constitutional derangement. At the time when ulceration commences, the constitution will be affected by irritative fever, the same as is always met with when the process of restoration is set up in any other part of the body. But the disease does not affect the constitution in any serious degree. This swelling is first hard, — in the second place, fluid, — thirdly, unattended with pain, — and fourthly, there is no particular constitutional irritation, excepting when ulceration commences, and then it is slight, and not at all alarming to the patient's mind. This disease never requires removal on account of any thing malignant in its character, but it is generally done at the solicitation of the patient, in consequence of the inconvenience she experiences from the size and bulk of the breast.

When it has acquired any considerable magnitude, a slight inflammation begins in one part, and then this ulcerates, which allows of the discharge of a serous fluid. This being discharged, and the cyst empty, suppuration, with partial adhesive inflammation, is set up, and the cyst becomes obliterated; another undergoes the same process, and so on, one after another. A sinus seems to form, which leads from that in a state of suppuration to another cyst, and thus it undergoes the same change as the one with which it communicates; in other parts the cysts do not break in this way, as in the ovarium; one cyst bursts, another remains unopened; they are distinct, —so in the breast, they are divided into different bags; but one or two ulcerate and suppurate, which communicate with the rest, and then the breast gradually wastes. I have never seen an instance of this affection cured by natural

means; it remains for months and years, the cysts sometimes breaking one after another, and thus the breast wasting, till little of it remains. It occurs at almost any period after puberty under twenty, and after fifty; between fifty and sixty, and I have seen one case of it in a person above sixty. In persons under twenty, I have met with several instances, and you more frequently see it in the young than in advanced age; from fifteen to twenty-five more so than after that age.

It sometimes acquires a most extraordinary magnitude. I operated once on a lady from Northamptonshire for this complaint, and the breast weighed I think fourteen pounds. I am not quite sure as to the exact weight, but I know it was of an immense size. I operated lately on a lady not very far from my own house; the removed breast weighed thirteen pounds, and consisted of an immense number of cysts. I was to have operated on a patient this very day for this complaint, but not having time, I was obliged to postpone the operation; probably I shall do it to-morrow; I will bring the removed part down with me, in order that you may be masters of the appearances which are produced in the breast, under this state. A great many mistake this complaint for the malignant cyst; but he is extremely ignorant, Gentlemen, who can mistake the one for the other; for the two diseases are very different in their character. Of the causes of this complaint we know nothing, nor of the production of the cysts; these are points involved in obscurity. On dissection, the following are the appearances of a true hydatid breast:—It contains a globular hydatid, the same as is met with in other parts of the body; this produces a cyst, which becomes the parent of others, and when you open it, you see little ones growing from the internal membrane of the cyst. Many of you recollect that I opened an hydatid cyst in the thigh of a man at the other hospital a few months ago, and that a great number of small hydatid cysts were drawn off; I ordered some of them to be preserved; the internal lining of the first cyst is like an uterus to the others; these grow from it in spots here and there, and at last become parricides, for they destroy the parent; thus it is in the breast, exactly the same as in the liver.

When the swelling has ac-

quired a considerable magnitude, the operation is generally performed for its removal, the patient is anxious that it should be performed; if she asks, is there any danger if left alone: you can assure her that there is none; yet as long as she feels the swelling, she is incapable of enjoying life—gives way to desponding feelings of every kind, insists on the operation being performed, and thus is the surgeon obliged to do it on account of the patient's solicitations. I tell you, assure her there is no danger to life, and still she persists in having it done. The operation is neither dangerous at the time, nor in the future, to the patient's life. The largest breast with this affection that I ever removed, was done without the constitution suffering in the least degree. The patient's life is not in danger from it, and as for the disease, you never find it return in any other part of the body. If any diseased part should be left on the gland, there will be a chance of the return of the disease. If so, other hydatids form in the same breast, but not in the other, therefore the best plan is to take away the glandular structure of the breast, and all the diseased part being removed, the complaint will not return. Although the removal of the breast is the plan usually adopted, yet I will tell you a mode of treatment which I have employed with success when there has been a single cyst. I will give you two examples which will illustrate the nature of it better than any thing else. I do not know that it has been described by authors, but I will not speak positively of this, for God forbid that I should be obliged to read one-half or one-fourth of what is published now-a-day.

Case I.—A young woman was sent by a respectable medical practitioner to Guy's Hospital, with a swelling of the breast, and for the purpose of knowing whether an operation was necessary for its cure. She was nineteen years of age, and when I examined the swelling it was moveable, and I was almost inclined to suppose that it was scirrhous; but her constitution was sound, her general health exceedingly good, and I said no operation ought to be performed. I kept her in the hospital some weeks to see the progress of the complaint; but the girl being tired of waiting any longer, left the hospital. I lost sight of her for three years, at the expira-

tion of which time she came back to Guy's with a considerable swelling of the breast, which on examination I found to be partly solid, and partly fluid. The gentlemen being assembled in the theatre to see the operations, I ordered this patient into the room, and said that I should not remove the breast, but simply introduce a lancet into it, and open the swelling. Having done this, water, paler and less coloured than serum, escaped in abundance through the opening. I said, 'All that it will be necessary to do here, will be to produce the adhesive or suppurative inflammation. Do not close the opening till the adhesive process has commenced, and glued the sides of the cyst.' This was done, the sides of the cyst were glued together, the opening was closed, and the patient was discharged quite cured.

Case II.—During last summer a lady came to me with a swelling of the breast, not very large, but hard. At first I was led to think it scirrhous, but did not decide on its character; and on looking at the constitution of the patient, I was pretty well assured that it was not scirrhous, nor of a malignant kind. I said that I would watch it; and told the patient that all it was necessary to do would be to attend to the state of her bowels. She came to me from time to time, and I perceived that in the centre some fluid was forming. After some time the fluid accumulated, and one day I put a lancet into the swelling, and discharged a quantity of serum. I put some lint into the wound so as to form a tent to preserve the opening: in a short time granulations arose from the bottom of the cyst, and the lady became perfectly cured, no disease having returned in the breast. It will be proper to put you on your guard against malignant diseases of the breast, which are not so numerous as is thought. A great number of the affections of the breast are capable of cure; and it requires attentive observation to distinguish one from the other; therefore when you see diseases of the breast, do not be in too great haste to put them under any classification, for if you do, you will frequently be liable to error.

We now come to the *scirrhous tumour* of the breast. There are but two malignant diseases of the breast; this is one of them, and the other is the fungous tumour. The scirrhous tumour is the one which I shall describe in this

evening's ecture, of the other I shall speak at a future time.

Of the Scirrhous Breast.

This is an extremely frequent disease, and its symptoms are as follow: The first symptom of scirrhous breast is the discovery (as the patient says, by accident) of a hard and moveable swelling; now and then a little blood is discharged from the nipple, which stains the shift; this is produced by the inflammation extending along one of the lactiferous tubes, and thus blood is discharged. The swelling is attended with little pain. At first it is moveable, free from pain, and circumscribed. In this last respect there are varieties; it sometimes happens that the inflammation extends, and the disease is lost in the surrounding parts, yet it generally happens that you can mark out the exact situation of the tumour. In this state it continues a long time, for weeks and months, gradually increasing, and at last the second set of symptoms come on. A violent darting pain is felt in the breast; the patient says it is like a knife or lancet being pushed into it; there is also a burning sensation in the part, and the patient feels worse a little before menstruation—about four days before that period; indeed if you trace the disease, you will see that for the first fortnight after the periodical discharge the symptoms are less severe, but that for the last fortnight and a little before the show of the menses the pain is excessive; it is not a continued pain, but comes at times, and is so severe as to make the patient start from the chair. I should say that the increase of the size of the breast is not equal, and that it does not follow any regular progression; it increases by starts; prior to menstruation it gains in size; after the menses have appeared, it again loses. The next circumstance is, that the glands in the axilla begin to enlarge, or those between the axilla and breast. The skin around the nipple has a puckered appearance; it is drawn in at the centre, and is elevated on the sides. This gives the part an appearance resembling that produced by ulceration and cicatrization; the skin is drawn in, and thus it presents the appearance of cicatrization without the reality. In the progress of the complaint a number of small black spots will be seen on the breast, and these increase as the breast enlarges. In the second stage,

inflammation on the skin and nipple comes on, and the cellular membrane partakes of the character of the disease. I have seen scirrhus of the skin as well marked as that of any other part. The third set of symptoms arises from suppuration going on in the part, for the breast undergoes the same process as any other part affected with cancerous disease. It is not true pus which is in general secreted, but after the adhesive process has been set up, there is an attempt at the formation of pus, which, if it forms, is not general, being only in some parts, and not in the others; and it is more properly a sanious serum, as it has not the common character of pus. This arises from the attempt at its formation being imperfect; and if you open the swelling, a quantity of bloody serum will be discharged. Prior to an opening being formed, the skin becomes livid, and the breast is very painful in that part where it opens. In general, the opening is not made by art, as the object is to prevent ulceration as long as you can; but when the ulcerative state has begun, the glands above the clavicle enlarge, the arm swells first just above the elbow, then it extends over the hand and forearm, and upper arm. There is an interruption to the functions of the absorbent system; the blood is not returned by the veins; an increased secretion takes place from the termination of the arteries; fluid is thrown out into the cellular tissue, which, when evacuated, coagulates. The constitution is severely affected, there is a difficulty of breathing; an inability to lie but on one side, pain in the right side, and also in the loins; and the patient says that she has rheumatic feelings all over the bones. The stomach is deranged; the patient has severe spasms at the scrobiculus cordis, and frequent vomitings; at last becomes worn out from irritation, and expires.

What do you find on dissection? Is the disease confined to the particular part, the breast, or are its effects general?—Gentlemen, I will tell you what you find on examination after death:—The breast is one solid mass like cartilage, with very little of vascularity, except its edges; internally fibrous, but the vessels are few, and pass over its surface. When the breast has acquired any magnitude, there is generally an opening in it; and then, internally, it has the appearance of being worm-eaten, and is

spongy: at the part where there is ulceration, it is very vascular, and with the ulceration you will find a bloody serum. The absorbent glands put on the same character as the scirrhous breast; but besides this, the scirrhus extends to the cellular membrane, the skin, and the muscles; the skin is scirrhous, the cellular membrane partakes of the inflammation, and also becomes scirrhous, and the pectoral muscles are full of scirrhous tubercles, which are white and solid; and thus a great part of its fibres are generally diseased. The glands in the axilla are of a scirrhous nature; in the beginning they are solid, and continue so until ulceration commences; then they become spongy, and contain a sanious serum. The glands above the clavicle are in the same state, and by pressure on the thoracic duct they cause an interruption to the process of absorption; chyle is prevented from being transmitted into the blood, and thus it is that the appetite is sometimes voracious, whilst the patient is rapidly wasting. But for the chest:—You find hydrothorax on the side affected, and the absorbent vessels on the pleura corresponding to the scirrhous breast are in a diseased state, and small white spots, like pins' heads, will also be seen. I ought to mention, that you should never operate in this complaint when dyspnœa is present; for I have known patients who have come to our hospital, and have been operated on for this disease when they have had this symptom, and who have died in two or three days after the operation; on examination, water has been found in the chest, and tubercles on the pleura. Now and then you find on the pleura covering the lungs tubercles on the surface opposite to the diseased breast, and having the true scirrhous character. But the liver is most frequently diseased; on the right lobe there are in general tubercles; the glands of the axilla being affected, the internal thoracic absorbents carry the diseased matter to the liver, which becomes tuberculated, and assumes the true scirrhous character. You rarely find the uterus free from disease; it is affected with what are called polypi, but they are rarely scirrhi of that organ; hence the pain in the loins, the result of the connection between the nerves of the uterus and those of the loins. This is not all the history of what is met in this complaint, deplorable as it is. I was ask-

ed to see a lady who had fractured her thigh-bone; I asked her how the accident happened?—she stated, by simply turning her thigh over the edge of the bed. When I was examining it, I saw that the left breast was in a state of scirrhous ulceration; I said, How long have you had this?—she replied, For a great number of years. The thigh united; but with so little firmness, that in going into bed one day she broke it ag ain. I attended another lady, who broke her thigh below the trochanter major, by very little force; and a gentleman, who was formerly my assistant, was called to a lady who broke her thigh by walking across the room,—each with a scirrhous affection of the breast. I was sent for to Sussex once, to see a lady who fractured her thigh by merely turning in bed, and who had at the same time a scirrhous affection of the breast; and what you find on examination of the bones of those affected with scirrhous tumours, is absorption, not only of the cancellated structure, but also of the shell of the bone. I attended a lady, with Mr. Young, a surgeon of the City (whose ill health the profession has deeply to deplore), who had a scirrhous affection of the breast, accompanied with agonizing pains of the back; the disease proceeded, and the patient was at last worn out by irritations. Both Mr. Young and myself were extremely anxious to ascertain the cause of the pain in the back, and on examination of the vertebræ, we found several affected with scirrhous tubercles, and in a state so as to surprise any one. The bone had been absorbed as far as the scirrhus had formed, which was as distinct as scirrhus of the breast. I operated on a patient at the other hospital for a scirrhous breast; the disease returned, and she came back to the hospital to end her days; she also had disease of the spine, from which she had suffered more than from that of the breast. On examination after death tubercles were found adhering to her spine; thus much for the appearances found on dissection. I shall conclude by observing, that what I have to say to you on the diseases of the breast and testis I wish particularly to impress on your minds; and I hope that I am not too arrogant in saying that the knowledge I possess of these diseases is to a considerable degree my own,—that it is the result of an extensive observation both on the dead and the living,—and that know-

ledge, to the best of my ability, shall be communicated to you.

LECTURE XLIII.

I WAS speaking, at the conclusion of the last lecture, of the dissection of the scirrhous tubercle, and I promised to bring some preparations shewing the effects of this disease on different parts of the body. Here is a part of the thigh-bone, taken from the breast of the patient who broke her thigh on rising in bed. On examination, there were found scirrhous tubercles in the thigh-bone, which you have now an opportunity of seeing. Here is a specimen taken from the lady of Sussex, who had disease of the breast, and who fractured her thigh turning herself in bed; she had excruciating pain in the thigh after the accident, but she lived a long time afterwards. On examining the part after death, we found it affected with scirrhous tubercles, which had commenced in the cancelli of the bone, and lastly the shell had given way. You will see the scirrhous tubercle exterior to the bone. I had a specimen sent me by a practitioner in the country, of the os humeri, which had undergone a similar change. In opening the body of one of the ladies whose case I have mentioned to you, I found the sternum affected with scirrhous tubercle. I stated to you the case that I attended with a respectable surgeon of the City, where the vertebræ were affected; and here is a specimen taken from the patient at Guy's, who had distorted spine, and a return of a scirrhous tumour in the breast, after an operation had been performed. There is a deposit of scirrhous matter on the vertebræ. These different preparations shew that the formation of scirrhous matter is not confined to the breast, and that it is only the index of a disordered constitution. (The Learned Professor sent round the theatre the different specimens just alluded to, illustrative of the cases which were mentioned at the end of the last lecture, in order that each student might have an opportunity of examining them for himself.) I shall now continue the subject of diseases of the breast, and shall state to you some further particulars respecting the scirrhous breast.

Scirrhous Breast.

Married women who bear no children, and single women,

are more subject to this complaint than those who have large families. It is very probable that the natural change which the breast undergoes in the secretion of milk has some power in preventing this diseased affection of the breast, which is certainly less frequently met with in married persons who bear children, than in married persons who do not, and those who remain in a state of celibacy; but it is no security against this complaint that a woman has borne children. I knew a woman with this disease who had been pregnant seventeen times; she had borne nine children, and had eight miscarriages, so that in the whole she had been pregnant seventeen times: yet the disease in this person was as large a scirrhus as I ever witnessed. Although the disease comes on more frequently in those who have had no children, in consequence of the breasts not having undergone the natural change in the secretion of the milk, yet this is no security against the complaint, though it lessens the tendency to it. It is generally believed that scirrhous tubercle of the breast is connected with the cessation of the menses. I believe that if a person has a tumour in the breast which is not malignant, and that it remains so till the change of life takes place, that then an undue action may be excited in the part, and the tumour becomes scirrhous just at the cessation of the menstrual discharge. But the disease generally occurs at an earlier period: the period at which scirrhous tubercle is usually formed is from thirty-five to fifty years of age; more frequently under forty than above it, though I have met with a great number of cases from forty-four to forty-five years of age; however, it is more frequently found under forty than above it. It is not a disease of young persons; it is rarely seen between twenty and thirty. The youngest person that I ever saw with this disease was twenty-seven years old; I have seen another case in a person of twenty-nine; but excepting these two cases, I have never met with it under thirty. I know that there are many tumours met with at an early age, which are called scirrhous tumours, but they are not so, Gentlemen; and the medical man who asserts that they are is deceived as to their nature, for the tumours found at this age are quite of a different character from scirrhous tumours. The disease, then, called scirrhous tubercle is found from thirty

to fifty years of age; under thirty rarely, for I have only met with two cases below thirty in the course of a life which has been favoured with considerable opportunities of watching this disease. As to the most advanced age at which I have seen this complaint, it is at eighty-six. A lady, eighty-six years of age, came to me with a scirrhous tubercle of the breast. When she called, she asked, "Should it be removed?"—I said, "No, keep it; it will not shorten your life, for this disease is slow in its progress, when occurring in advanced age." She probably lived as long with it as if it had been removed; the breast never ulcerated: she had no pain in it, and the patient died of other complaints. However, I removed a scirrhous breast from a lady who was seventy-three years of age. It had begun to ulcerate, and the patient was anxious to have it done. Her state was unpleasant to herself, and the smell from the part offensive to those around her; and on these accounts she was anxious to have an operation performed. It was at her own earnest solicitation, and not at my suggestion, that it was done. The disease did not return, and the patient did very well.—You see then, Gentlemen, that there is no period, however advanced, at which scirrhous tubercle of the breast does not occur; but it is not to be met with in the young.

The progress of this complaint is in some persons extremely slow. In general, however, it destroys in about four years from the commencement. It is from two to three years in its growth, and from a year and a half to two years in destroying life, after it has arrived at its acmé. When suppuration and ulceration have commenced, and the constitution is disordered, it is even then some time before the patient is worn out. Four or five years often elapse before life is destroyed. I have known some curious examples, in which the progress of the disease to the destruction of life has been exceedingly slow. I mentioned to you on a former evening that, in the lady who broke her thigh by turning in bed, I discovered accidentally at the time that she had an ulcerated scirrhus of the breast. On feeling the surrounding part, I found a number of scirrhous tubercles, and I said, "Madam, how long have you had this disease?"—"Twenty-two years, Sir," she replied. There was a patient in the other hos-

pital once, who had an ulcerated scirrhus of the breast, and it had remained in that state for seventeen years. I am anxious when a patient comes to me with this horrible complaint, in such a state as to afford her no hope from operation, to mention these examples. I am anxious to say to her, "Though your complaint has arrived at that stage in which an operation will be of no avail, and though it is of that nature which does not allow of cure by medical means, yet I can tell you of many instances in which it has been exceedingly slow in its progress, and if you have your life prolonged ten or seventeen years you will be perhaps content." This excites a beam of sunshine in the breast, and a gleam of joy on the countenance; "Death," she then says, "is not so near as I expected," and her anxiety of mind is removed by the hopes which she has of the fatal event being procrastinated. It is right, Gentlemen, in humanity, to mention these cases to patients labouring under this most distressing disease.

It sometimes happens that two or three in the same family are affected with scirrhous tubercle. I have known it occur in three sisters who were related to a medical man. The first would not undergo an operation, and she died of the disease. The second did undergo the operation of having the scirrhous tubercle removed from the breast, but she died of a return of the disease. The third sister is still alive, and the disease in her has not yet proceeded to a fatal termination. It sometimes happens that members of the same family will be attacked with this complaint; but this is not invariably the case—but I do state that it is right when you observe the disease in one sister, to direct your attention immediately to prevent, as far as you can, its affecting the others.

Now, Gentlemen, as to the causes of this disease; it is very frequently attributed to accident, but this is rarely a cause; now and then it is the result of a blow, or pressure on the part, or injury to it in some shape or other, but this is not often the case. Although the disease operates on some particular part of the body, yet it is always preceded by a state of constitution which has excited it. He who looks at this disease in the light of a local affection only, takes a narrow view of it. A blow or a bruise inflicted on a healthy

person would be followed by common inflammation only, which would lead to the removal of the matter effused. But if a blow were received on the breast when the constitution was in a state disposed to the formation of scirrhous tubercle, it would be the cause of a particular action being excited in the part injured, and might lay the foundation of this complaint; therefore you see that no blow, no pressure on the part, nor any accidental circumstance whatever will produce scirrhus if the constitution be sound. There must be some predisposing cause in the constitution, else it will not occur. Yet the formation of scirrhous tubercle does not entirely depend on constitutional derangement; there must be also a peculiar action excited in the part, and if there be no specific action, not any of the scirrhous kind, you will have no appearances of the disease. To show you that it is dependent on these two states, constitutional derangement—and an altered action in the part,—I will mention to you, that if you cut into a scirrhous tubercle, it will ulcerate, and all the horrors of cancer will very soon be the result of the injury; but suppose you cut round the tumour, in the healthy parts where the disease has not shown itself, the wound heals, and no ulceration of the part follows; and again, after the removal of a scirrhous breast, the wound usually heals very kindly. If there is a disposition in the constitution to the production of the disease in any part, some circumstance exciting a peculiar action in it must occur, and then scirrhous inflammation is produced. The disease is made up of a derangement in the constitution, and of a local peculiar action; it is the effect of a specific action in the part preceded by a disposition in the constitution to its production. The scirrhous tubercle is said to be fibrous; here let me observe that the fibres do not belong to it. They are nothing more than the cellular tissue thickened; if you were to macerate a scirrhous tumour, you might pick out from the cellular tissue the scirrhous substance, and it would then have the appearance of a honeycomb, from the circumstance of the cancerous matter being removed. This is deposited between the cellular tissue, in the same manner as the substance of the testicle is between septa.

Treatment of Scirrhous Tubercle.

I now come to the treatment of scirrhous tubercle; and first let me observe, that we possess no medicine which has any power over the disease—none which has any specific influence on it; and those who say that they have in their possession a medicine which is a specific in this complaint are empirics, and men entirely lost to all sense of shame, honour, and honesty. Our profession boasts of no such remedy, and the medical man has still to seek it. We have no medicine that will cure this disease; and it is our duty, as professional men, to say so, in order to prevent the baneful influence of those quacks who are a disgrace to the age in which they live, and who are constantly advertising *nostrums* for the cure of cancer. Honestly, then, let me state to you the fact—we have no medicine that can cure this disease: but I will tell you all that can be done by the administration of internal remedies in it. If a patient applies to you with scirrhous tubercle, and her general health is in a disordered state, you may retard the progress of the disease by giving alterative medicines, and thus prolong her days. You should never perform an operation for the removal of a breast, unless the patient has undergone a course of medicine. Another view with which medicine is to be given is this: if an operation has been performed, you should alter the state of the constitution by the exhibition of alterative medicines, such as Plummer's pill, and the compound decoction of sarsaparilla; or, what I prefer, infusion of gentian, with soda and rhubarb; by these means you will improve the constitution, and lessen the chances of the disease returning. You may alter the constitution, but I defy any man to disperse scirrhous tubercle when it has formed. No man of common honesty will pretend to do it. Thus, all we can do by medicine is to change the state of constitution prior to an operation, so as to prepare the patient for it; and when an operation has been performed, we can give alteratives so as to lessen the chance of its returning. But medicine will not have any effect on scirrhous tubercle when it is formed; not one tittle. You may take away the surrounding inflammation by local means, but you can remove no part whatever of the scirrhous inflammation. I

should have observed just now, when speaking of the causes of this complaint, that one of the most frequent is grief, or anxiety of mind. It arrests the progress of the secretions, produces irritative fever, and becomes the forerunner of scirrhous tubercle. How often have I seen, when a mother or a nurse has been watching, night after night, with anxious solicitude, the pangs and sufferings of a child, and she has had the comfort and gratification of seeing its recovery, that in a short time after this she has come to me with an uneasiness of the breast, which on examination I discovered to be scirrhous tubercle. Full three-fourths of these cases arise from grief and anxiety of mind. It is the state of mind and body which predisposes to this disease. The mind acts on the body; the secretions are arrested, and the result is, the formation of scirrhus. Look, then, in this complaint, not only at altering the state of constitution, but relieve the mind, and remove the anxiety, if possible, under which the patient labours.

As to local treatment, we possess no specific local applications. They can do nothing more than retard, in some slight degree, the progress of the disease. It is sometimes accompanied by common inflammation, and evaporating lotions are occasionally used. I do not think you would act wisely in employing them; they seem rather to do harm than good. Warm applications are also improper, if they be of considerable heat. Under warm applications the disease grows, for they increase the determination of blood to the part. If poultices are used, they should not be above the natural heat; but patients generally complain of them as being uncomfortable. It is better to employ the soap cerate. If there be much pain with the disease, I order a drachm of extract of belladonna to be rubbed down with an ounce of the soap cerate, this diminishes the nervous irritability of the part, and the advantage of the soap cerate is, that it excites a gentle perspiration without any undue heat; it is the most useful application that I know of. If there be much inflammation you can apply leeches, though the mode of treatment which I like, is to alter the constitution, and the best for this purpose is the exhibition of five grains of Plummer's pill (the pilula hydrargyri submuriatis composita of the pharmacopœia) at

bed-time, and on the following day

R. Infus. gentian. ℥ iss.
Sodæ carb. ʒ ss.
Tinct. columb. ʒ i.
Ammon. carbon. gr. v.

It is necessary in this disease, for which no specific is known, to give those medicines which restore the constitution generally. You will restore the different secretions by Plummer's pill, and diminish the irritability of the nervous system by the carbonate of ammonia; this is the best plan, as far as I know, to keep the patient alive as long as you can. Some say, you should pay attention to diet; so you should, but if you give a patient a vegetable diet, allow her nothing but water to drink, and keep her low, it will be the worst plan you can pursue, if her strength is affected, you will by this means lower it still more, and soon bring her to the grave. I tell you what every man who has observed for himself knows to be true—I mean those, at least, who have not spent their lives in the closet, but in watching disease. If a patient consults me how she is to live, I say to her, take those things which you find agree with your own feelings best, and which do not derange the general health. If she asks, 'Should I take any wine?' I say, "No"—'Or any spirits?' "Certainly not," (God forbid that women ever should;) "never hurry the circulation, nor take any thing so as to disorder the constitution,—but support the strength by animal food. If you should ever take any wine, mix it with water." The patient sometimes says, she has been told to 'live on vegetable food only:' my reply is, that "I should like to know why you have been told so; for the man who has done it knows nothing of the nature of the complaint." I assure you, Gentlemen, that if you weaken the strength by low diet, you will immediately quicken the pulse: you will perceive it in a person with the pulse at 80 increase in a short time to 110 and 120, and become small. Rest assured that, in proportion as you weaken the constitution, you quicken the pulse. Do not debilitate it then on the one hand, nor stimulate it on the other; for if you do, it will be the sure way to hasten the progress of the disease. It was only yesterday that I met in consultation three medical men, (one of whom was Dr. Farre,) on a person affected with scirrhus. Dr. Farre has studied his profession as a pro-

fessional man ought—has dissected for himself, and by this means has become intimately acquainted with the structure of the human body. He has watched disease with care in every stage, and when opportunities have occurred, has pursued morbid anatomy with a zeal not often equalled; acquiring a knowledge of the changes produced by disease on the different parts of the human frame. This is the way to study medicine: but as to the physician who attends merely to his pharmacopœia and prescriptions, which any tyro in the profession can do as well, he neglects the true means of acquiring professional knowledge. One point of discussion at this consultation was, how the patient should live. I waited, as I wished to hear what the others had to say. 'Shall she live low?' was asked; 'Certainly not,' said Dr. Fabre.—I then said, "I am very glad, Sir, to hear that opinion come from you." The conversation on the subject then began, (Mr. Travers also was one of the gentlemen present,) and we all uniformly agreed that what we had observed in every case of cancer or malignant tumour was, that in proportion as the patient is kept low, you precipitate her course to the grave; this is uniformly so, and I particularly dwell on it, in order to prevent your minds being poisoned by false doctrines.—Many, I have no doubt, believe an opposite mode of living to be the best, and conceive that they have seen it do good. They have tried it, and have thought the patient benefitted, without taking into the account every concomitant circumstance which has had an influence on the amelioration of the patient's condition. The way to learn the effects of remedies, and different modes of living, is to try them without having entertained any preconceived opinion as to their efficacy. If a remedy is tried under the supposition that it is sure to do good, the practitioner will soon think that it does: no; the only plan is to watch impartially the effect of medicines on the constitution, for in following the other way I have mentioned, you will kill more in youth than you will save in age.

Climate has been supposed to have an effect in preventing that state of constitution which favours the return of the disease; I tell you it has no such influence. A person who has scirrhous tubercle in England would receive no advantage by

going to a warm climate, or by any change whatever. I will give you an instance, which will illustrate this point very well. A woman who was operated on in this country for a scirrhus of the breast, went soon after to the island of Trinidad; at the time she left England the wound had healed. Soon after she reached Trinidad, the tumour returned, and the glands of the axilla became enlarged She was brought back to England, with her constitution extremely debilitated: at the time of her return it was winter; she soon sank and died. In England this person had submitted to an operation: she went to a warm climate soon after; the disease then made its appearance again, and she returned to this country in a cold season, which had no effect in retarding the progress of the complaint; in the warm country the disease was not prevented from returning; in this, its progress was not arrested by the cold.

Operation for the removal of a Scirrhous Breast.

This operation is nothing more than a simple piece of dissection; it consists in making a semicircular incision at the upper part of the breast, and over the tumour; in this step you cut through the vessels which supply the scirrhus. When the mammary artery and its branches have been divided, you desire an assistant to compress the vessels by pressure, just above the incision, and you then go on excavating the parts and cellular tissue; the pectoral muscle is laid bare (and it is a good plan always to do this,) lastly, it is right to divide the integuments below the tumour, lest, as it sometimes happens, a gland is enlarged in the axilla; then it will be best to remove it, and the intervening part between it and the breast; for if you cut out the gland only, the disease returns, and it is always attended with unfavourable results. The absorbent vessels are the means by which the disease is communicated to the other parts. If the glands in the axilla generally are enlarged, do not operate, for the disease will be sure to return. I never saw an operation performed under such circumstances successful. After the breast is removed, bring the edges together by suture: in the earlier period of my life I did not adopt this practice; I have since found that the wound heals better if sutures are employed than adhesive plaster only. You put one or

two sutures, which keep the edges together; when you observe a drawing in of the nipple, always secure that part. This very day I removed a breast with a nipple in this state, in company with a respectable medical practitioner, and I cut through the centre of the nipple, to see whether it had any connexion with the tumour. I saw a scirrhous band going across it to the tumour. I would observe, that the scirrhous tumour is not all the disease; there are roots which extend to a considerable distance; and those who gave this disease the name of cancer probably knew more of its nature than we are disposed to give them credit for. It is supposed by some that this name was given on account of the appearance of the surrounding veins. I should rather say that it was from the appearances on dissection than from any thing without. When you dissect a scirrhous tumour, you see a number of roots proceeding to a considerable distance, and if you remove the tumour only, and not the roots, there will be little advantage from the operation; no glandular structure, nor any of the roots should be allowed to remain. Bear in mind what I said of giving medicines before and after the operation. Before the removal of a scirrhous tumour, put the patient under a course of alterative medicines, and afterwards do the same, else the operation will be of no use; in a large proportion of the operations the disease returns; I have found it difficult to state an average. If I were asked, 'in one half of the cases?' I should say—"no;" 'if one fourth?' "no;" but the disease returns in the breast or other parts of the body, after an operation in a great number of cases—still I perform the operation, and why? because I feel it my duty to say to a patient with this complaint that "there is only one chance for you, and that is, an operation; it sometimes prevents the return of the disease, and it may do it in your case." 'If this is my only hope,' she says, 'I will submit to it immediately.' Another reason why I perform it is, that now and then you see a patient with this disease in a state of ulceration, worn out by frequent bleedings, fœtid discharge, and most horrible pains, and by removing it, hope is again revived, and she is again restored for months, and sometimes years, to a state of comparative ease. On these two accounts, although an

operation may be unsuccessful in one case, and is sure to be so in the other, yet I perform it, for a surgeon is obliged to do it at the solicitation of his patient.

Sketches of the Surgical Profession in Ireland, No. 2.—Mr. Todd.

To the Editor of The Lancet.

Sir,—Next to Mr. Colles in official importance, Mr. Todd presents himself, "full, fat, and forty," for biographical consideration. His robust frame, rustic features, and ruddy complexion, along with other corresponding charms, would do equal honour to the hale member of a farming society, or the beef and claret amateur of a city corporation. His sleek, well-fed person, is a most appropriate illustration of the *ventri obedientia* of Sallust. The head, more distinguished by what it is not than by what it is, rises above his "brawny shoulders, four feet square," by an unusually short cervical interval, and possesses many of the characteristic beauties of the Paddy Carey family. It is partially covered by a few surviving filaments of lank hair, thinly spread over its surface, which seem, notwithstanding the richness of the soil, to be perishing for want of nutriment. The eyes large, and though not sparkling with the pure flame of the diamond, yet glisten with the soft and subdued lustre of the best French paste composition. If it be true, as it has been asserted, that the mind in moments of excitement sallies through those spiritual spy-holes, a conclusion unfavourable to its activity might be drawn in the present instance, from their slow and heavy evolutions. From what we know of Mr. Todd's mental energy to the contrary, the observation does not apply in his case; but logicians say that the exception proves the rule. His forehead, denuded to a considerable extent for the years of the man, may be said to be of the composite kind, in which no particular organ predominates. A nose somewhat Roman in shape and dimension completes the personal outline of the subject of the present sketch. It is any thing but the *beau ideal* of a professor's head. As it is probable that Mr. Todd is not destined to be an object of much interest with posterity, the place of his birth, his parentage, and education, may be safely omitted. The natal incidents and juvenile propensities of great men only are worthy of record, as it is pleasing to trace through their various stages the development of those powers which astonish in the maturity of life. Presuming, therefore, that it is with the public as with ourselves a matter of the most perfect indifference in what parish our professor's cradle was rocked, or what spectacled school-dame had the honour of

teaching him the alphabet, we shall pass at once, even at the risk of a breach of precedent, to an examination of Mr. Todd as he is, and leave to others, if they choose, to descant upon the circumstances of his nativity.

Having served a tolerably long novitiate in the drudgery of the dissecting-room, he has lately emerged from the obscurity of that situation, being called by the consent of the College to the dignity of a Professorship. While he discharged the duties annexed to the former office, he was much and deservedly esteemed for the accuracy of his anatomical knowledge, and for the clear concise manner in which he communicated that knowledge to his pupils. So minute, indeed, were his demonstrations, that it is said here, that the vertebral and other ligaments expanded to a degree beyond what nature had intended. It was his worst fate, however, to have been educated under a system the contagion of which was irresistible, and to possess facilities of ascending to that pinnacle of eminence, on which the most aspiring would be satisfied to rest, without that fair competition which tries the strength of candidates for professional honours. Had he been unassisted by extraneous aid, and left to his own resources, 'tis probable he would now have escaped the ordeal of criticism; but at present he holds a situation that precludes him from neglect, and exposes him to that discussion to which all public characters are subject. The day is past when office and merit were coupled together in men's minds as cause and effect, and when the gown of a Professor, like the ark, was considered inviolate. This revolution in public sentiment is a glorious triumph over the prejudices of our blindfolded predecessors, for though the consequences of undue influence are still manifest in most institutions, yet the cynical race of the present day are not to be duped by the splendour of a name, or the length of a title. We therefore much doubt the propriety of an individual risking the quiet of his mind, by giving up a situation in which he was respected, and accepting of another where success was dubious. The transition from demonstrating to lecturing seems so easy, that the person who performs the one well, might naturally expect that he would do justice to the other with equal facility; but the train of duties which the latter department of surgical tuition brings along with it makes it much more difficult than the former, and he that would have the good sense to consult his own powers, and to observe the great distinction between those branches of education, would illustrate by his conduct the truth of those observations we have just advanced, and would never be afflicted with the *lumbago* at the approach of the first Monday in November.

That men can excel in that situation only for which they have a strong predilection there are too many melancholy instances. There is no individual, however humbly endowed by nature, who cannot by industry, exerted in a proper sphere, ensure respect, and if he cannot command our applause, he may pass without provoking censure. It is only when men by inordinate ambition and the injudicious interposition of friends, are elevated to offices unsuited to their capacities, that they excite our contempt, and become the objects of merited ridicule. A paviour, as long as he follows his own avocation of arranging stones in due order, is a very useful member of the Commonweal; but if, instead of the mallet, the sceptre is committed to his hands, is it to be wondered if he should be as worthless as one of the Holy Alliance? So it is with those who, outraging the intentions of nature, would fain ascend upon the Pelion and Ossa foundations of vanity and presumption, to those situations where none should ever presume to preside without the credentials of genius. But in a country, or to limit the application of our remarks, in a body where every thing surprises without giving delight—where the ends are all, and the means nothing—where intrigue seems the soul that animates the mass, and candour is sneered at as the attribute of fools—surely in such a labyrinth of designed complexity the high-mindedness of genius stands no chance with such ungenerous competition. Such is the Surgical College of Dublin, presenting the extraordinary circumstance of the absence of men distinguished by a single discovery in modern Surgery, that cannot be otherwise explained than by a consideration of the prescriptive principles upon which it has been founded. Established at an era when science of every description was making a rapid progress towards its present perfection, but more especially that department of it which this Institution was exclusively founded to cultivate, it is somewhat singular, that the projectors did not take such measures as would ensure success. Unlike other establishments of a similar kind, this had not to contend with the dogmas of authority, or to break through the shackles of precedent. Under skilful architects, it might have assumed a form of unrivalled excellence. Instead, however, of extending its basis for the greater diffusion of its utility, it was contracted into a narrow circle of corporate monopoly. The system of education adopted was much better calculated to suit the convenience of the teacher than to advance the interests of the student. These reflections we are well aware may be by some considered irrelevant to the nature of our undertaking, but as our manner is of the rambling, digressive kind, we wish to turn even our faults

to some advantage, by giving our professional readers upon the other side of the Channel some idea of a state of things here, which, we understand, they mean shortly to make a subject of Parliamentary investigation. We wish they may do so, but with feelings differing widely from theirs, "for our first best country ever is at home." The measure which they propose, if successful, will lead to results the very reverse of those intended, and precisely what we wish of all things should take place,—a re-action in the persons concerned in the professional education in Ireland.

Of the system, at which we have only glanced, Mr. Todd, we are sorry to say, is an ardent admirer and an able champion, if we take as indications of his sentiments and powers the elaborate eulogiums which he lavishes upon this institution in his introductory lectures. It happened to be on one of those solemn occasions, at the opening of the winter session, when the effluvia of musk and lavender, combined with the jetty lustre of kid gloves and silken hose, confer additional interest upon the person of a professor, and give a sensual delight to the intellectual banquet prepared from an Encyclopœdia, that we first had the pleasure of hearing Mr. Todd hold forth with an enthusiasm quite amusing, upon the transcendent superiority of his own beloved institution—the Surgical Corporation of Dublin. To us the exhibition was no less amusing than it was new, but even the charms of novelty were soon lost in those feelings excited by some opinions of the grave speaker. Had we been less versed in the history of our profession, we might have supposed that the Colleges of Paris, Edinburgh, and London were but planets of a minor order, and that the *Alma Mater* of York-street was the glorious sun round which they revolved at an immeasurable distance. When we recollect the serious composure of countenance with which he warned his junior auditors, as he called them, against the horrors of foreign surgery, and when we recollect that on the following day in his discourse upon that eternal common-place of introductory flourishing—digestion, he was compelled to borrow from those sources which he had so lately and so wantonly attacked, we know not whether to weep for his ingratitude, or to smile at his presumption. Surely it is not well to turn thus upon our professional parents, of whom we are but the degenerate offspring, or the servile imitators—'tis not well to revile those men, the repetition of whose experiments, and the detail of whose labours, confer upon us a temporary semblance of learnedness—'tis not well, after having made ourselves masters of our neighbours' treasures, to raise our puny hands and tear from their brows the laurels which they have so dearly

earned, and in the genuine spirit of legitimacy, defend our spoil "by the right of conquest."—No! the philosophic mind shrinks from the disingenuousness of detraction—it recommends with caution—censures with reluctance—and if it discovers any perfection beyond its own attainment, it envies not, but admires. It knows no distinction but that which merit constitutes. It is not influenced by any of those petty local prejudices which sway the ordinary mass of society. It embraces within the sphere of its benevolence every scientific man of every country, and considers them as so many coadjutors in the one grand undertaking—the diffusion of knowledge for the amelioration of the sufferings of the human race. It should be recollected, and it must strike every person who reflects upon the history of the past, that the systems which are now the fashionable standards, may appear to future generations as visionary as those of a century back seem to us; that they are but the "Cynthias of a minute" to be lost in the "heliacal rising" of some future discovery.

Digressions, like crimes, generate others. Nature, ever capricious in the distribution of her favours, gives to some personal, to others mental advantages; to few only a combination of both. The accomplished speaker and the man of deep research are seldom found united in the same person. To make a strong impression upon the minds of an audience, a conjunction of these requisites is necessary, and in no case, perhaps, is a graceful delivery more essential than to a Professor. The dry details of Anatomy, and the abstract speculations of Physiology, require no small share of ornamental illustration, to fix the attention upon subjects of so uninviting a nature. One of these requisites Mr. Todd possesses in an eminent degree, in the other he is lamentably deficient. In other hands the fund of knowledge which he possesses might be expanded into all that is beautiful and useful in surgical discourses. Perhaps it is to the *regime* of that system, with the principles of which he seems so deeply imbued, more than to his physical defects and cold temperament that his spiritless manner ought to be attributed. In an atmosphere of competition, where the nerves of the mind become vigorous from the collision of ambitious rivalry, he might appear a different man. His manner, however, which comes more immediately within the sphere of our duty, we shall endeavour to describe, for we would not wish to be understood as deciding upon the professional merits of any individual. We only touch upon the surface of things,—upon looks, words, and gestures, and give them, if we can, a permanency in the mirror of description. Since the publication of "Letters by an Apprentice," in which the system

of education of the College of Surgeons was justly censured, Mr. Todd has taken good care to obviate many objections of that writer, by giving the class an opportunity of taking a cursory glance at the treasures of the museum. The table behind which he stands is no longer a *tubula rasa*, with nothing to relieve the eye from the uniformity of the scene save the refreshing verdure of some green baize. It is now daily strewed with those rarities which, forsooth, excel, in point of execution, even continental ingenuity; all which Mr. Todd arranges "in gay theatric pride," with as much precision as an experienced butler collocates the intricate furniture of an epicure's dinner-service. To this array of morbid preserves a watch is added, as if the speaker was about to run a race with time, or to measure his discourse by the revolution of the minute hand. Every thing being at length adjusted to the professor's satisfaction, he patiently waits until the Exquisites have drawn up their spear-pointed shirt-necks—frizzed up their curls—settled their umbrellas—and until the last echoes of brazen boot-heels and clanking of chains have died away among the benches. The moment of inspiration commences—the speaker emunges his nose with all his might—a doleful voice, scarcely audible, something like the melancholy moan of the midnight breeze, which so few have heard, informs you that the person whom you might have supposed destitute of the organs of speech, possesses in some respect the faculties of speaking. As yet all is little more than dumb show and pantomimic solemnity. By degrees a few deep inspirations bring the vocal organs into a more perfect state of modulation, while each word, separated from its fellow by a considerable *hiatus*, is followed up, *pari passu*, with a delectable accompaniment, reverberated through the mazy labyrinths of the nose. The invariable monotony of the Gregorian note only can rival the *sing-song* solemnity of this surgical ditty. In vain you expect that the importance of the subject, the presence of an audience, and the situation of the speaker, would call forth some animated exertion. But his narrative is never enlivened by any of those practical anecdotes and *double entendres* with which Mr. Colles occasionally sets his hearers in roars of laughter. He does not possess the same colloquial fluency or tact of discrimination which are the principal attractions in the Lectures of the latter gentleman. Yet with these defects the student who will be satisfied with mere instruction, such as a candidate going in for his examinations, as it is termed here, will be much improved by attending Mr. Todd's lectures. But to do so requires no small share of patience, along with a flow of animal spirits, or he will enter the lecture room as

gloomy as if he had been on a visit to the cave of Trophonius. Independent of the delivery, it is to be regretted that there are many virtues in these lectures which, by bad management, turn out downright blemishes. Unlike Mr. Colles in this respect, this gentleman seems to have some notion of the utility of arrangement, but from a confusion of parts tolerably well executed the same results follow as if no idea of order had existed. There is in general a *proem;* it may be, and sometimes is, a good one, but either itself or its echo will surely be repeated twice or oftener, during the remainder of the discourse. So with the other parts of the lecture, until the "Diruit, ædificat, mutat quadrata rotundis" of the Roman poet is most satisfactorily elucidated. This mixing and combining, saying and unsaying, repeating and recapitulating, loses all the effect intended to be produced upon the mind, for instead of being impressed with one connected whole, it is ultimately stupified by the frequency with which the same subjects are forced upon its attention. It is as if an architect wished to give us an idea of some particular order, and that he presented us with a model in which the same pediments, pillars, and volutes, were every where incrusted upon its surface; or, like the Indian, who broke the mirror to multiply its reflections.

In the quarterly meetings of the College Mr. Todd's voice is particularly influential, for being of those principles in academic politics which are best described by the word *ascendancy*, he is sure that his propositions will meet with the approbation of his professional brethren. So seldom indeed does any man of spirit come forward upon these occasions, that opposition is out of the question. This want of spirit is to be attributed, in a great degree, to the fear entertained by the junior members of the College, of drawing upon them the wrath of the elders. The state of Society too has no inconsiderable influence upon the destinies of Irish Surgery. Innovation in matters even purely scientific is looked upon with a jealous eye, and the member who would dare to speak his sentiments freely would be next suspected of a secret alliance with Captain Rock.

There are only two other situations to be considered, in which Mr. Todd's character is involved: his connexion with the Richmond Hospital, and the "Dublin Hospital Reports." The London College, in enacting a law which compels pupils from this country to attend this institution, or Stephenson's, have been much out in their calculation; for we can assure them, that from the manner in which these students are treated at either of these Hospitals, they have but

little chance of acquiring a competent knowledge of their profession. We have had frequent opportunities of witnessing what we assert, in following Mr. Todd through the wards of the Richmond, wedged in, as he usually is, between a phalanx of his own pupils, while those intended for the London diploma-shop, as he politely calls it, follow in the rear at a respectable distance. How can persons thus circumstanced, repulsed on the one side by the *hauteur* of the master, and on the other by a privileged order of students, gain any information? The thing is quite impossible, particularly as there are never any clinical observations delivered. We therefore have no hesitation in saying, that any of the minor Hospitals of the city are preferable to those unwieldy institutions. There are two medical periodicals in Dublin; of the principal one, the "Dublin Hospital Reports," Mr. Todd is one of the Editors, and a constant contributor. If an illustration of the want of energy in the surgical profession in Ireland were required, this publication would offer in itself a most satisfactory corroboration of the remarks we have made upon this body. It is published but once a year, so that its visits are like angels', "few and far between," and seems to be got up for no other purpose than to register, in capital letters, the names and titles of thirteen or fourteen surgeons and physicians at the head of the same number of articles. When it is considered that there are annually admitted into the Dublin Hospital from eight to ten thousand patients, and that out of this vast number there are but some twenty cases reported, astonishment is by no means an unnatural feeling; nor can censure be misapplied. Look here, you who annually waste the "midnight oil," in preparing invectives against the Institutions of every other country—look here into this mirror of your own making, and learn from your insignificancy, to appreciate at least, if you cannot rival, the example of others. Oh! for some men to break the lethargic spell by which the profession of Ireland are bound, and to infuse into their torpid veins some portion of that spirit which animates every country but this. Shall we ever see the fetters that bind the Irish genius struck off by some superior intellect? Shall we ever behold in the profession of our country a man possessed of the sublime daring of a Cooper,—the philosophic research of a Home,—and the accomplished genius of a Lawrence, no less distinguished for his scientific attainments than by the fearless independence with which they are promulgated, and the scorn he would feel for any thing like a mean and mercenary retractation of opinions? To expect such a change would

be to speculate farther than sober reason would warrant, as long as the present order of things exists. We must therefore be content with hoping for more auspicious times.

ERINENSIS.

Case of Poisoning by the Bite of a Viper, cured by the affusion of cold Water. By Dr. G. PRINA.

(From the Annali Universali of Omodei—December, 1823.)

CARLO NAVA, of Crevenna, aged fourteen years, of a delicate constitution, in the month of May, in this year, was bitten by a viper, while climbing over a rock in our mountains, situated to the south-east, to get a bird's nest, at the last joint of the index finger of the left hand. A very acute pain at the part, which extended to the shoulder, and which made him utter a piercing cry, was the immediate consequence. He ran to his father's house, whence he was immediately brought to mine; but as I happened to be absent on my professional duties, my wife poured a little spirit of nitrous æther on the wound, which was so small as to be scarcely visible. This was half an hour after the accident, when he exhibited no other symptom, except great inquietude. On his return to his father's house, his prostration of strength was visible; a tendency to sleep was observed, and the slight swelling at the part increased, and extended to the arm. In this state he was taken to the hospital at Lezza, which is distant about half a mile, where he was made to swallow a few drops of caustic ammonia, diluted in an ounce of water. He was then brought back to my house, and upon seeing him I found that, in addition to the above-mentioned symptoms, there was loss of vision; great difficulty of respiration; retching succeeded by vomiting, jaundice, and an excruciating pain in the umbilical region, with tension of the abdomen. The pulse was small and frequent. I immediately prescribed half a scruple of pure ammonia in three ounces of peppermint water to be taken every hour, in doses of two table spoonfuls. When I next saw him, his debility had greatly increased: he entreated, in a hoarse voice, to be allowed to sleep, and expressed his indifference as to whether death should ensue. Near his father's residence there was a small cascade of water from a very cold torrent, which is chiefly formed by the snow that collects in the upper parts of the mountain. I prevailed upon the patient to put the hand which had been bitten under this cascade, and afterwards to expose his head to the stream, which flowed freely over his breast; and upon his being immediately rubbed dry, he seemed to be greatly revived. This was repeated three or four times, and always with the greatest advantage. Encouraged by this success, I caused him to be stripped and immersed in a piece of water

formed by this torrent, and at the same moment, water was poured upon his head, from above. He stayed two minutes in the water, and on coming out appeared to be still more revived;—his pulse was fuller, and less frequent, though still irregular. His sight was partly restored, though his eyes appeared turbid; his countenance was improved; and he had less pain in the abdomen, but the attempts to vomit continued. He could walk a little without assistance, which he was unable to do before, and persons who had been attracted by curiosity to the spot observed that the immersing him in cold water operated like oil in an expiring lamp.

From this time the alarming symptoms ceased. He underwent five immersions within a short time, water being poured as before on his head, which was not immersed. The repetition of the affusions was strongly desired by the patient, as the pains in the region of the umbilicus ceased entirely when he was in the water. Two hours after he walked freely without any assistance; and with the exception of the jaundice, and some pain in the abdomen, all the bad symptoms had disappeared; his pulse had become nearly natural. All that was done to the part bitten was, to apply to it a piece of linen steeped in the decoction of marshmallows, and the mixture of ammonia, which he had finished, was ordered to be repeated. The symptoms of jaundice disappeared on the next day: on the third day the swelling had gone down, and left only a slight vesicle, which, on being opened, discharged a little yellow matter; two days after the wound was entirely healed, and the patient perfectly recovered. I am not aware that cold water has ever been employed otherwise than as a topical application for the bite of the viper: in the present case several general immersions were resorted to in the way recommended by Dr. Currie and Signor Giannizi. This mode of treatment would seem to be directly opposed to the sudorific plan recommended by Professor Palletta. As it is an extremely difficult matter to explain satisfactorily the action of remedies, I shall not pretend to decide whether the efficacy of cold water, employed as above, consists in its removing the spasm produced by the poison, according to Hoffmann, or in restoring the disordered sanguineous and nervous assimilation, according to the theory of Mead; whether the sudden immersion acts by depressing or stimulating the system. If I may state my own opinion, I believe that, in the foregoing case, the cold affusion removed the morbid symptoms by removing the irritability of the system, which is always caused by the bite of the viper, in a greater or less degree, in proportion to the activity and the quantity of the poison absorbed. I am the more confirmed in this opinion, because I have always

found the cold affusion most useful in those forms of disease properly called irritative. — However this may be, it is certain that, in the above case, the cold affusion completely removed all the formidable symptoms: a result so interesting, that it cannot fail to induce every philanthropic practitioner to repeat the experiment, though it can scarcely be hoped that it will, in all cases, be attended with equal success. No patient bitten by vipers on the southern and eastern sides of our mountains has ever been known to recover, where the general symptoms have reached a certain height: a strong man of the Vill' Albese lately died in eight hours, though he only received a single bite on his finger; in this case a youth of delicate constitution recovered, after the symptoms had reached a most alarming height. From the experience I have had of the consequences of bites of vipers received in our mountains, I can state that the observation of the Abbé Fontana, that two grains of the poison are necessary to cause death, is incorrect; two grains could only be emitted by repeated bites, and death frequently ensues after a single bite.

Experiments showing the Effects of the Acetate of Morphine on the Human Body.

If, from the effects produced by the acetate of morphine on animals, we were to infer that this substance would produce similar effects on man, we should be greatly mistaken. Very considerable doses of this substance given to some animals, did not produce death, and that in others, doses which may be considered as enormous, produced no effect whatever. On man, however, this salt appears to act with much greater energy. Thus M. Magendie says that a syrup composed of

Acetate of morphine 4 grains,
Simple syrup 1 pound,

will produce all the effect of the syrup of poppies, and that a tea-spoonful taken every third hour will induce sleep. He also tells us that persons who take morphine do not experience the *stimulating effects* which are produced by the aqueous extract of opium. However, about the same time that M. Magendie published this account, M. Fievre said, in his pharmacology, "We should never give morphine, especially the acetate of morphine, which *excites the brain* of most persons who take it, to such a degree that we have often seen it bring on a dangerous access of delirium." (p. 473.) Since that time the action of this substance on the human body has been studied with more attention, and the following results have been ascertained.

M. Sertuerner took the *sixth part of a grain* of the acetate of morphine dissolved in a drachm of spirits. Soon after

the blood rushed to his cheeks and eyes; he fell into a slight doze, and experienced vertigo, and considerable pain in the region of the stomach.

M. Chevallier, druggist at Paris, tried upon himself the effects of this substance; and we are enabled to give the following results of the experiments, which have not hitherto been published.

Exp. I.—In the first experiment made on the 8th of December, 1823, M. Chevallier took the *fourth part of a grain* of the acetate of morphine dissolved in three ounces of distilled water. The draught was bitter, and excited a slight degree of irritation in the throat. This irritation ceased in twenty minutes, but was followed by head-ach, which was more severe on the right than the left side; this ceased at the end of about half an hour. The countenance became altered, and the pupils dilated. A quarter of an hour after he felt nausea. The tongue was red at the edges, and violet-coloured in the centre. The pulse beat slowly; it was full, and intermittent. Soon after he fell into a disturbed sleep, from which he frequently started up. This sleep lasted six hours. On waking, his head ached; eyes encircled with a livid mark; mouth parched, general depression; all these symptoms were removed by exercise.

Exp. II.—In a second experiment, made on the following day, M. Chevallier took *one third of a grain* of the acetate of morphine in the same quantity of distilled water. Half an hour after he had severe head-ach, redness of the face and tongue, a feeling of dryness and constriction in the throat, nausea, but no dilatation of the pupils. His sleep lasted five hours, and was more tranquil than on the preceding day.

Exp. III.—On the 10th of December M. Chevallier took *half a grain* of the acetate of morphine in the same way as in the two former experiments. The head-ach, irritation in the throat, and thirst were intense. He had colic and griping pains in the stomach; pupils dilated; respiration laborious; sleep uneasy and interrupted, as in the first experiment.

Exp. IV.—In a fourth experiment M. Chevallier took *a grain* of the acetate of morphine; twenty minutes after came on the head-ach, irritation in the throat, thirst, spasms, and inclination to vomit; respiration laborious; every inspiration caused a sharp pain; the pupils were not dilated; his sleep was long, and tolerably calm; but the extreme lassitude he felt on waking made him abandon the design which he had formed of taking larger doses of this substance.

From these experiments the most constant effects of the acetate of morphine appear to be a feeling of constriction in the throat, head-ach, nausea, difficult and painful respiration, sleep followed by nausea, anxiety, and lassitude. With re-

spect to dilatation of the pupils it was observed twice, and was absent in the other two experiments; no contraction of the pupils was observed in the latter cases.

In the third and fourth experiments M. Chevallier observed, on waking from his sleep, an eruption of red pimples, situated in patches on his arms and thighs; this eruption continued a considerable time, and was accompanied with intolerable itching. The results of observations made on patients, to whom this substance has been administered, do not correspond with the experiments of M. Chevallier. M. Bally, who read lately at the Royal Academy of Medicine a long paper on the effects of the acetate of morphine administered medicinally, observed phenomena, some of which correspond with those remarked by M. Chevallier, but of which the greater part is altogether different. In giving doses from the eighth part of a grain up to *five grains*, he has almost always observed nausea and vomiting, but scarcely ever thirst or redness of the tongue. The organs of respiration have never appeared to him to be affected; in one patient only the use of the acetate of morphine appeared to have brought back symptoms of hæmoptysis. One of the most constant effects observed by M. Bally was tenesmus, and contraction of the abdomen. He sometimes found the pulse full and slow; but most commonly he found no remarkable alteration of the pulse. In twenty-one cases M. Bally observed a *contraction* of the pupils. This observation expressly opposes the result of the experiments of M. Chevallier, and those upon animals. The lassitude felt by M. Chevallier has been very seldom observed by M. Bally. The latter has met with individuals who appeared insensible to the effects of this substance; and he mentions the case of a German aged sixty-four years, who took *a grain and a half* of the acetate of morphine twice a day without any sensible effect.

Lastly, M. Bally has observed one of the frequent effects of the acetate of morphine to be a difficulty in making water, which M. Magendie never observed. He has employed it with advantage in chronic diarrhœa, and has seen it procure expulsion of worms.

From all we have stated, it may be concluded that the acetate of morphine is a remedy too little known at present to be safely substituted for opium. The difference of the results obtained in the above-mentioned instances is to be attributed, undoubtedly, either to circumstances connected with the persons on whom the experiments were tried, or to differences in the preparation of the remedy; for this preparation varies to such a degree, that it has been stated by a druggist at Paris, that in one instance a patient could take sixty grains of it with im-

punity. We must wait, therefore, for more experiments and new facts, before we can assign to the acetate of morphine its true place in the materia medica. After having stated the opinions which at present exist, with respect to the effects of this substance, it may be useful to point out the chemical process for ascertaining its existence in the stomach in cases of poisoning. M. Lapaigne, having been requested by his associates in the foregoing experiments, MM. Dupuy, Deguise, and Leuret, to investigate this point in the fluids and tissues of animals poisoned with the acetate, proceeded in the following manner: First, the matter vomited by a dog, to which 12 grains of the acetate had been given, was submitted to evaporation; it produced a small quantity of yellow extract, of the smell of gravy, of a bitter and somewhat salt taste, and which reddened litmus. This extract was treated with alcohol heated to 36° (Reaumur), which separated it into two parts, one flaky, insoluble, formed of mucus and gelatinous matter; the other soluble in this liquid, which was separated from it by its evaporation. From the chemical properties of the acetate of morphine, it might be reasonably concluded, that if it existed in the liquor vomited, it would be found in that portion of the extract which was soluble in the alcohol. Consequently, the alcoholic extract was re-dissolved in a small quantity of water; it then left some yellow flakes of greasy matter. Submitted afterwards to a slow evaporation, the aqueous solution deposited some prismatic crystals, divergent, of a yellowish colour, which exhibited the following properties:—

They had a bitter taste. Their solution in water was precipitated by ammonia in white flakes. Treated with sulphuric acid, concentrated in a small glass tube stopped at the end, they disengaged a well-marked odour of acetic acid.

Dissolved in weak nitric acid, the acid soon turned of a yellow colour, which became deeper by a small addition of acid, until it assumed an orange hue, and afterwards a fine yellowish red colour. All these characteristic circumstances proved that the crystals were acetate of morphine.

Secondly, on examination of the stomach,

That viscus was found to be completely empty; as our experiments were now to be made on a solid substance, it became necessary to vary the process a little. We first boiled it for ten minutes in ten ounces of distilled water; after this we filtered the liquor and carefully evaporated it. The residuum, treated by boiling alcohol, was in part dissolved. The alcoholic solution, of a light yellow colour, yielded by evaporation an extract of a somewhat deeper colour, of a salt and rather bitter taste, which exhibited by the addition of a few drops of nitric acid a fine orange colour,

bordering on red; a property which denoted the presence of a small quantity of the acetate of morphine.

Thirdly, the blood obtained by opening the carotids of an animal, some hours before it would probably have died from the effects of the poison, and two hours and a half after its injection into the stomach, was carefully dried in a china vessel. The residuum was brought into contact with alcohol, slightly acidulated with pure acetic acid; the mixture having been kept at the point of ebullition for some time was afterwards filtered. The alcoholic solution evaporated by a gentle heat yielded an extract of a pale yellow colour, which was washed with hot distilled water. By this means was separated the greasy matter which enters into the composition of the blood, and which had been dissolved during the treatment with alcohol. The aqueous mixture, submitted to evaporation by a moderate heat, yielded a residuum formed of salts of the blood, soluble in alcohol with the addition of a small quantity of the acetate of soda. We searched in vain for any traces of a salt of morphine.

Conclusion:—It results from the experiment of M. Lassaigne,

First, that it is possible, in many cases of poisoning by the acetate of morphine, to detect, by the chemical process above pointed out, sensible traces of this vegetable poison.

Secondly, that it is always the viscera, to which the poison is first directed, in which those remains of it are to be found which attest its presence.

Thirdly, that the matter brought up in vomiting, a short time after the injection of the poison into the stomach, contains a quantity of it which may be weighed.

Fourthly, that all attempts which have been made to detect it in the blood of animals, which have died from its effects, have been unsuccessful.—*Gazette de Santé, Feb.* 25, 1824.

Danger of smoked Provisions.

M. G. Kerner, a physician at Stutgard, has just discovered a new species of poison proceeding from smoked provisions; it appears, from experiments which he has made, that such provisions become subject to a species of decomposition, which renders them poisonous. Sausages made with liver are most liable to it, and the decomposition generally takes place towards the middle of April. Dr. Kerner has ascertained that of seventy-two persons in a district of Wurtemburg, who partook of smoked sausages, thirty-seven died in a short time, and the others continued ill for a longer or a shorter period.—*Ibid.*

LECTURE XLIV.

Fungus Hæmatodes.

Various names have been given to this disease: it was originally called soft cancer, but having been found materially to differ from true cancerous disease, that name was relinquished, and the one given to it by the late Mr. Hey, of Leeds, viz., Fungus Hæmatodes, is that which is now generally employed.

Although this affection has some resemblance to scirrhous tubercle, yet it differs from it in very many and essential particulars; one of which is, that it attacks persons of all ages after puberty; whereas the scirrhous tubercle, as I explained to you in my last lecture, does not attack the very young, as we rarely see it under the age of twenty-seven. It occurs more frequently then in early life than scirrhous tubercle, and not so frequently in advanced years. It is very uncommon to observe scirrhus before the age of twenty-seven; but by no means uncommon to see fungus hæmatodes at a much earlier period. This disease, in its earlier stages, by no means feels so hard as the true scirrhus. When you press upon it with the finger, the spot readily receives an indentation; but upon removing the finger, the hollow which it had produced becomes instantly filled again.

In the earlier stages, likewise, there is little pain, which is another strong discriminating mark by which you are enabled to distinguish it from scirrhous tubercle. Practitioners who for the first time see this disease, and who happen to be unacquainted with its nature; unacquainted with the positive and negative diagnostic signs by which it is known, are astonished at the trifling degree of pain which patients feel when these tumours are pressed upon, or indeed when they are even roughly examined. This want of tenderness, then, want of hardness, and want of pain, are the discriminating characteristics which direct your judgment towards forming a correct conclusion as to its true nature; and at the same time will clearly portray to you the difference between it and the genuine scirrhus.

In addition to these marks, the tumour which constitutes fungus hæmatodes is not so clearly defined, as scirrhous tubercle; it is difficult to say where the diseased structure terminates, and where the healthy structure commences the base of the tumour is, there

fore, diffused among the healthy cellular membrane, or other parts where it shall happen to be situated; and in this respect differs most decidedly from scirrhous tubercle, as I explained to you in the last lecture.

There is still, Gentlemen, another diagnostic sign in fungus hæmatodes of the breast, which is, that the disease may advance even to suppuration, and ulceration, without the glands of the axilla becoming at all affected.

When this disease exists, and is removed by the knife, it will rather shew itself, should it again appear, in some distant part of the body than in the glands of the axilla. The disease is much quicker in its progress than scirrhous tubercle; it grows much faster, the morbid action appears to be much more active, consequently, in six or eight months it will have acquired very considerable magnitude; whereas in true scirrhus, at the expiration of even two years the disease often will not have reached any remarkable size. I have seen the skin covering fungus hæmatodes of a livid colour as early as the thirteenth week from the commencement of the disease, and in five months I have known it destroy life; therefore I am fully justified in saying, that it is much more rapid in its progress than scirrhous tubercle; for we find that it becomes in the course of a few months, of considerable bulk, having a livid surface, and a fluctuating feel; this sense of fluctuation does in reality arise from a fluid; and which fluid, when discharged, has the appearance of coffee. It is composed of serum, the red particles of the blood, and bile; that it is true serum is known by a portion of it coagulating on its admixture with the alkalis, muriatic and nitric acids, and from the application of heat; that there is bile in it is known by the yellow tint which it gives to white paper. I have at this time, in a bottle, some paper which was written upon with this fluid some years since, and the yellowness is perfectly distinct up to the present period. Although the fluid contained in the cyst of fungus hæmatodes is of so dark a colour, yet it is not of a malignant nature; it sometimes is perfectly transparent, being much more clear than the serum of hydrocele; having in it less albumen, and more water; but most frequently the fluid is of a dark colour, resembling coffee, as I before stated to you, and composed

of the red particles of the blood, serum, and bile.

Well, as the diseased action goes on, inflammation is excited, and at length the cyst bursts; nature attempts to relieve, by exciting, in the parietes of the cyst, the adhesive process; but failing in this attempt, owing to a peculiarity of constitution, a fungus sprouts forth. Here (holding up a preparation) you see it shooting out in the manner described; the edges of the cyst being everted, or turned away from the fungus. In a short time it becomes of a considerable size, and the discharge from it really enormous; so great indeed that it will as completely wet a handkerchief, in the space of half an hour, as if it had been dipped in water; and the smell of the discharge is often so disagreeable, that the surgeon, who has seen much of this disease, will be acquainted with its character the moment he enters the patient's room. Now, Gentlemen, this disease has a continued disposition to slough, and from which circumstance it occasionally receives a natural cure, for instances have been known, where the entire tumour has sloughed, and the wound healed kindly, to the permanent relief of the patient. Mr. Cline had a patient in this hospital whose fungus separated in the manner I have just described to you. She was discharged cured from the hospital, but whether the disease ever after returned I am unable to inform you.

The dissections of those who die of fungus hæmatodes shew that it generally exists in different parts of the body at the same period; and the cellular membrane, together with many of the glands, will be found studded with tubercles; for the disposition of the constitution to produce the disease in one situation naturally operates towards producing it in another, and thus it will be present in many parts at the same time, although its severity in one particular spot will be the immediate cause of death.

(The Learned Lecturer here exhibited to the class several preparations, illustrative and confirmatory of the foregoing remarks.)

The liver and lungs are very commonly attacked with these tubercles, the liver so much so, that you are often unable to make the least section of it without some of them being observable, shewing that every part of this gland is equally filled with them.

The uterus is not unfrequent-

ly diseased from fungus hæmatodes; likewise the ovaria; the cellular tissue; the brain and medulla spinalis, but of all the parts of the body most frequently attacked there are none so much so as tendinous structures. And so desirous, as it were, does this disease appear to be to attack these parts, that we find when it is situated in the breast, that it not only grows externally, but penetrates deeply through the pectoral and intercostal muscles, regularly following the course of the tendons and tendinous expansions.

Causes of Fungus Hæmatodes.

When many important parts are affected at the same time, it is evident that the cause must be constitutional; in fact, it ever owes its origin to a peculiarity of constitution. Although it may thus arise in almost every important organ at the same time, and be thus generally diffused throughout the system, yet it appears that it may possess merely a local occupation of a part, and the neighbouring structures be entirely free from any morbid or diseased action; for upon removing fungoid tumours, we find that the wounds thus produced heal as kindly as any other wounds caused by the extirpation of any other tumours. In making this observation, I wish it to be understood most distinctly, that your incisions are to be made beyond the discoloured or inflamed parts, for if you cut into the skin which has become reddened, it will, of course, have taken on its peculiar morbid action, and the disease will most unquestionably still continue to grow in that situation. Therefore I particularly caution you never to introduce your knife into the integuments which surround fungoid tumours, should such integuments have become discoloured by the influence of the disease. So, likewise, in amputations for fungoid diseases, if you do not operate at a sufficient distance from the seat of the malady, you will find that the granulations which form upon the surface of medullary structures, will possess a fungoid character, and ultimately put on every appearance of the original disease. Very carefully, therefore, avoid cutting into parts in the vicinity of fungoid diseases; and if you do not, depend upon it that your operations will be rarely successful. It is necessary, for the purpose of promoting the favourable issue of your operations, that you should attend

to the state of the patient's constitution, both before and after the operation. With this view, you should allow him a nutritious diet, pure air, and a reasonable proportion of exercise; you should likewise prescribe for him, in the way of medicine, either the hydrargyrus cum creta, or Plummer's pill, together with some bitter infusion, and soda. Local means are of very little service in this disease; indeed, I believe, unless they are assisted by constitutional remedies at the same time, that they will prove utterly useless. Some practitioners rest their hope entirely on local applications, but this is truly absurd, as it is next to impossible that a cure can be effected by them.

It has been attempted to cure fungus hæmatodes, by causing it to slough, and it has been endeavoured to accomplish this by means of pressure, which destroys its circulation; at the same time, however, that pressure is employed, you must carefully attend to the state of the patient's general health; for if you do not, your other efforts will be attended with disappointment. Much has been said respecting the largeness of the vessels in these tumours; but if these vessels are large no danger ought to be apprehended from hæmorrhage, as the bleeding can easily be stopped by means of pressure. The fact is, that blood-vessels, situated in fungoid tumours, have no contractile power; consequently, when they are cut into, or divided, the bleeding from them will continue for a considerable period, unless pressure be employed.

With regard to the success of the operation, it may be said, that it is more successful at the immediate part operated upon than is the case in scirrhous tubercle, but it certainly returns more frequently in other parts of the body, and in which situations it probably existed in an incipient state at the moment that the operation was performed; it is altogether an unmanageable complaint, and one which is calculated to cast opprobrium upon the practice of surgery.

Simple Chronic Tumour of the Breast.

This disease is not of a malignant character, and by no means dangerous to life; it is generally very young people who are attacked by it, and we seldom see it in persons above thirty years of age. I will try to describe, in a familiar manner, the mode in which this disease will be exhibited to you.

A young person, between the age of fifteen and thirty, will be brought to you by her parents, on account of a swelling in her breast; when you look at her, you see that she has a perfectly healthy appearance, and, in all probability, is much younger than those who are usually attacked by scirrhous tubercle. Her parents being naturally anxious for their child's safety, express their fears of the disease being cancerous; at this you smile, and tell them that cancer does not attack persons of her healthy appearance, or persons so young: upon examining the breast you find an exceedingly moveable tumour, but more diffused in the surrounding substance than true scirrhus; that is, its limits are not so accurately or distinctly defined, having likewise a lobulated feel, being divided into distinct apartments by septa, producing the same kind of sensation to the fingers as fatty tumours; you have here (delivering a preparation to a student) an opportunity of seeing this kind of tumour, and upon carefully examining it, you will find that the account which I have given you is correct. Well, then, the age and healthy appearance of the person; the lobulated feel of the tumour, and its lying more blended with the neighbouring parts, will at once point out to you that the disease is not cancerous; which, Gentlemen, you may inform the person's parents, and likewise tell them that the disease never will become cancerous. I assure you that this disease is not in the slightest degree of a malignant character, neither is it attended with the least danger. Now then, as to the result of these tumours: they may grow larger, and may be attended with pain at the periods of menstruation, but never will prove of serious consequence; upon that you may depend. If, however, the mind should be rendered wretched in consequence of the existence of such a tumour, an incision will instantly enable you to remove it, and thereby allay all mental irritation; but as far as the tumour is itself concerned, and as regards the health or safety of the patient, the operation is by no means necessary; the size of the tumour is generally from that of a filbert or walnut to that of a billiard ball. Here are some preparations (giving them to the students) in which you can see their general size and character; here, however, is one of very considerable magnitude; it appeared that the general health of the woman from whom this

tumour was taken, was very little affected: she felt pain in the tumour at the menstruating period, but there was no broken state of constitution, or general debility. The causes of these tumours are usually obscure; it is difficult to say what gives rise to them, but I believe a frequent cause may be traced to the pressure produced by the whalebone and steel busks usually worn in stays.

Treatment.

I do not find that medical treatment has any influence upon these tumours; you may, however, for the purpose of correcting the state of the constitution, should any thing amiss exist in it, give the hydrargyrus cum creta or Plummer's pill, together with soda and rhubarb; these medicines, whatever they may accomplish towards preventing the growth of the tumour, certainly will not disperse it when once formed; at all events, if you do not try medicines, you cannot relieve by them: in the use of mercury, however, be particularly careful not to push it too far, for should you do so, the remedy will prove much more dangerous than the disease; and it is likewise a hazardous experiment to administer mercury to young people who are exposed to the vicissitudes of our climate. The worst that can happen is the removal of the tumour by means of the knife; an operation which is not attended with the least danger, and always succeeds in affording permanent relief, for the disease does not return. The vessels which supply these tumours are by no means large. I recollect on one occasion, however, when a surgeon was removing one of them from a woman's breast in the other hospital, that upon separating the base of the tumour from its attachment, so violent a gush of blood took place, as for the moment completely to appal the surgeon, and induce him to believe the knife had penetrated the patient's heart; subsequently it was discovered that one unusually large vessel, which supplied the tumour, had been divided, and from thence the violent bleeding arose. Instead of the vessels being of great size which feed these tumours, it is found, upon dissection, that they are merely small branches from the neighbouring cellular tissues; this, then, is what I name the simple chronic tumour of the breast. It now and then occurs that the breast, as well as other parts of the body, is attacked by *Adipose Tumours*, and some of them

have been known to acquire enormous dimensions. I have myself removed one from the breast of a woman which weighed fourteen pounds ten ounces. This is the tumour (the Professor here put his hand upon a preparation which stood upon the table before him), and although it may appear to you an operation of a most formidable nature, yet it was not so; there was no risk attending it, and the only peculiarity which existed was, that the veins were much larger than in ordinary tumours of the breast.

The next tumour which I shall describe is very common in young people, and I have called it

The Irritable Tumour of the Breast.

Like the simple chronic tumour, it generally occurs in persons from fifteen to twenty-five years of age. These young persons are of sanguineous temperament, and often of lovely aspect. The parents in this case, like the former, shew the greatest solicitude for their daughter's welfare, and anxiously inquire of you if the disease be not cancerous? You endeavour to soothe their minds by representing to them its harmless, inoffensive nature, at the same time telling them that cancer does not attack individuals so young or so healthy as their daughter. Upon the breast being bared, and upon examining it, the moment you touch the tumour you will find that the patient will instantly shrink from you, and will be so alive to the most trifling pain, that she may be compared to a sensitive plant. If you examine the tumour otherwise than with gentleness, she will experience pain for hours, and even days afterwards, so exquisitely tender is this irritable swelling. Although it is painful in common, yet the tenderness and pain immediately before the period of menstruating are almost incredible; the pain extends from the breast to the arm on the affected side, and down to the fingers' ends, and has even been known to affect the sight.—There is no necessity for alarm in these cases; the cause of the disease is easily ascertained; it merely arises from functional derangement. There is no visceral disorganization, and to afford relief, you have merely to adopt such measures as are calculated to restore to its proper quantity and condition the uterine secretion.

It has happened that some practitioners have removed a great portion of the glandular

part of the breast on account of these irritable swellings. Such operations are not only unnecessary, but highly improper, as it is impossible that they can prove of any service, for the irritable breast is sure to return unless the menstrual discharge be restored to its natural state; to accomplish this, the best medicine you can administer is mistura ferri composita, an ounce and a half of it two or three times a day; or from two to five grains of the ferrum ammoniatum, two or three times a day, and from this combination of ammonia and steel, I have seen the greatest possible benefit result to the patient. As the uterine discharge increases, the irritation in the breast lessens, and will soon completely disappear.

Several surgeons are in the habit of applying leeches to breasts thus affected; whether they prove advantageous or not, I think, is exceedingly equivocal, for by diminishing the strength, it is possible they may prove highly injurious. Be particularly upon your guard against operating for the removal of these irritable swellings; such operations will prove hurtful to your reputation. Rather attempt to cure the disease by restoring to its proper quantity the uterine secretion; the irritable tumours of the breast are so common, that you will not have been in practice six months without having met with several such cases

Of Carcinoma in the Nipple of Man.

The nipple of men is sometimes affected with cancerous ulceration, similar to the breasts of women: it begins in the same way, in the form of the scirrhous tubercle; here, however, it is generally in the immediate neighbourhood of the nipple. An incrustation forms on the surface of the nipple; this drops off, another succeeds it, and another to that again, until an ulcer is produced, and ultimately the whole nipple is destroyed; then the glands in the axilla, and likewise those above the clavicle, become diseased: and men die from this complaint precisely in the same manner as women do from cancerous breasts. In this disease the chance of success from an operation depends upon its being performed before the axillary glands become diseased; if those glands are diseased, you should not then employ the knife; the result of two cases, which I saw some years ago, fully convinced me

of the propriety of what I am now telling you. In both those cases the glands in the axilla had partaken of the diseased action, and the disease appeared there with as much violence as ever, after it had been removed from the breast. The medicines which are used for the carcinoma in the female may also be employed here.

Tumours occasionally exist around the areola of children, from seven to twelve years of age. I do not know whether they have ever been described or named by authors, but I have always called them the *Areola Tumour;* they generally appear between the age of seven and nine; but I have seen them in children as far advanced as twelve years of age. Upon examining the breast, you will find a swelling as large as half-a-crown, just round the areola; flattened towards the outer edge, but convex in the centre, that is, the nipple, which the swelling closely surrounds.

Boys as well as girls are subject to this disease; but I never saw either afflicted with it after the age of puberty, nor anterior to the age ofseven.

The mode to adopt for their cure, is to apply the emplast. ammon. cū. hydrarg. having a hole in its centre, for the reception of the nipple; this plaster will generally succeed in effecting a cure in the space of six months; it should be occasionally changed or renewed, —say about every eight or ten days. At the same time that you are using the plaster, you should give to the patient the eighth or sixteenth of a grain of the oxymur. hydrarg. in ʒi. of tinct. cinchon. bis die. Or if the bowels should be disordered, you may substitute for the tinct. cinchon. ʒi. of tinct. rhei. The plaster constantly used, and these medicines occasionally taken, you will generally find, in the course of six months, that the complaint has been subdued. I have known it cured as early as the third month from the commencement of this treatment.

Of the Lacteal Tumour.

Women, shortly after their confinement, are frequently annoyed by these tumours. A female will come to you with an immense swelling in the breast, and, upon examining it with your hand, you readily perceive a sense of fluctuation; this leads you to believe that it is chronic abscess; but you will find no sign of inflammation, nor any inconvenience from pain. With a lancet, you

open the sac, and there will be discharged a considerable quantity of milk; the sac is filled by it only; and if the milk be put by for twenty-four hours its surface will be covered with cream. After the milk has been evacuated, you should introduce into the opening made by the lancet, a sponge or cotton tent, this in a short time will excite inflammation in the sides of the sac; adhesive matter will be thrown out, which, gluing the parietes of the sac to each other, will be the means of gradually obliterating the cavity, and thus produce a permanent cure. This treatment is effectual in relieving such cases; it is the best that I am acquainted with, and I have seen it most decidedly successful in at least a dozen instances.

LECTURE XLV.

Retention of Urine.

It is not my intention to enter at any length into the causes which produce retention of urine; for this part of the subject I shall leave until I describe to you the venereal disease, which I shall shortly have occasion to do. I shall at present merely state, that the most frequent causes of retention of urine, are strictures in the urethra, and enlargement of the prostate gland. There are several other causes, which give rise to this state; an accumulation of blood in the bladder; stones in the urethra, or the pressure of matter between the prostate gland and the rectum, will sometimes occasion a necessity for opening the bladder. In the female, the most frequent cause of retention of urine is, retroversion of the uterus. I have also seen a cancerous disease in the vagina, closing the meatus urinarius, and thus rendering it necessary to puncture the bladder. Before I speak more particularly of the means which surgeons recommend for relieving retention of urine by the knife, I will first shew you the method of introducing the catheter into the bladder. No man should think of performing any operation by puncturing the bladder, or in any other way, without first endeavouring to relieve the patient by the introduction of the catheter. The form and size of the catheter are subject to some variation; that which is used for strictures in the urethra differs materially from that which is required in cases of enlargement of the prostate gland. The prostate catheter, if I may so call it, should be two inches

longer than the common catheter; and the curve is considerably greater than that of the catheter for strictures in the urethra. The latter is, indeed, generally too much curved; the curve should be, as nearly as possible, like the natural curve of the urethra. The catheter is not only used for the purpose of drawing off the water, but it is often employed as a bougie; indeed, I commonly use the common catheter, as I shall hereafter have occasion to state to you, for the purpose of dilating strictures in the urethra, and consequently rendering any other operation unnecessary. When you are called upon to introduce a catheter, place yourself on the right side of the patient, pass it down under the arch of the pubes perpendicularly, until you reach the membranous part of the urethra; and then do not continue to pass the instrument in that direction, for if you do, you will push it towards the rectum instead of entering the bladder; but having reached the membranous part of the urethra, you have only to move your hand thus (showing the motion), and the instrument will immediately enter the bladder. This is the whole secret of passing a catheter; you have only to bear in mind the two motions which are necessary to effect your purpose, for if you continue to push the catheter onwards, when you have reached the membranous portion of the urethra, you will press the point of the instrument upon the rectum instead of introducing it into the bladder. In cases of enlargement of the prostate gland, there will be some difference in the mode of passing the catheter; and it is a difference which it is somewhat difficult to explain. When the prostate is enlarged, the urethra is pushed forward so as to be doubled on the point of the instrument. You must in this case pass the catheter down to the apex of the prostate gland, then carry the instrument towards the abdomen, so as to push the urethra as much as you can towards the perinæum, and then having brought the urethra into a straight line again, depress the point of the instrument, and you will be enabled to pass it into the bladder. (The learned Professor proceeded to shew the method of passing the catheter on the dead subject.) I certainly do hold that it is the fault of the surgeon, if the bladder is ever tapped for enlargement of the prostate gland: whenever such

an operation is performed for this disease, it arises entirely from the surgeon's want of knowledge and adroitness, for any man may readily pass an instrument into the bladder in these cases, if he understands the formation of the parts, and has been in the habit of introducing instruments into the bladder. I have now for many years been engaged in the practice of these hospitals, and I have seen something of the private practice of London, and I can assure you that I have never yet seen a case of enlarged prostate, either in these hospitals or in my private practice, in which it was necessary to puncture the bladder. I know that it has been done repeatedly; but if the surgeon is sufficiently adroit, it is never necessary. There are cases of stricture in the urethra, in which an operation for relieving the bladder of an accumulated load of urine is rendered necessary. Let us consider the means which different surgeons have proposed for this purpose; and first let me observe to you, that the bladder has not unfrequently been punctured above the pubes.

The operation of puncturing the Bladder above the pubes.

This operation is founded on the following anatomical circumstances: in the natural formation of the parts, the peritoneum falls from the inner side of the rectus, over the upper part of the bladder, and is reflected backward to the fundus, leaving a space filled with cellular tissue between the pubes and the reflected peritoneum. This is the space in which the surgeon performs the operation; but when the bladder is excessively distended with urine, it will sometimes happen, that it reaches as far as the navel, occupying a great part of the anterior portion of the abdomen. An instance of this may be seen in a cast taken by Mr. Solly, from a case which was brought a few days ago into the museum. (The learned Professor exhibited the cast to the class.) The peritoneum is not within the reach of the pubes, but is three inches removed from it; consequently, it is reflected over the bladder, and a large space is left for the operation between the reflected peritoneum and the pubes. Your object in performing the operation is, to avoid wounding the peritoneum, which is in the highest degree dangerous.—Cases have occurred, in which the peritoneum has been punctured, and yet the patient has

survived; but such a circumstance could only arise from the unskilfulness of the surgeon. The operation of puncturing the bladder above the pubes is one of the most simple and easy; it requires very little anatomical knowledge, and very little adroitness on the part of the surgeon who performs it. All that is required is this—make your incision through the integuments to the extent of an inch above the pubes. It is best to open the integuments in the first instance, because the trocar will afterwards enter the bladder with more ease, and because, if there should be any extravasation of urine by the side of the instrument, it will more rapidly escape. The incision should extend as far as the linea alba; with respect to the direction in which the trocar is to be passed, you must not, on any account, direct the point of the trocar downwards towards the anus, but obliquely from the penis to the back of the pelvis, just towards the basis of the sacrum. The trocar and canula being introduced, the water passes through the canula; an elastic gum catheter should be introduced through the canula, and left in the bladder. It is better not to leave a silver canula in the bladder for any length of time, because it is liable to ulcerate the posterior part of the bladder. Sharpe objected to the operation above the pubes on that ground; but this objection is removed by the substitution of an elastic gum catheter. There was another objection taken by Sharpe to this operation. He found that the urine was extravasated between the bladder and the posterior surface of the abdominal muscles, and accumulating in the cellular tissue, produced large abscesses, occasioning a high degree of irritation, and often destruction of life. This danger may be prevented by using an elastic gum catheter with a plug, by which the urine may be occasionally withdrawn, or a bladder attached to its extremity, into which the urine may distil. The catheter may be left in the bladder for a great length of time without producing any injurious consequences.

A man was tapped in the bladder in a situation which is not usual, the linea semilunaris; and a female catheter was introduced into it, and worn upwards of twelve months. The operation was performed by Mr. Hare, a surgeon in Essex. I saw this patient twelve months after the opera-

tion had been performed; he had then the female catheter in his bladder. I removed this catheter, and succeeded in introducing a common one into the bladder, through the urethra, with much difficulty, for he had a very bad stricture. In a short time he passed his urine freely by the natural course. I have seen some cases in which the bladder has been punctured above the pubes, where the patient has drawn off his water at pleasure, by turning a little silver cock. A professor at Edinburgh, who underwent this operation, wore a tube in his bladder for some years after, by which he drew off his water at pleasure. A few days ago, I saw Mr. Copeland Hutchison perform the operation of puncturing the bladder above the symphysis pubis, for an accumulation of blood in the bladder, which prevented the urine from passing by the urethra.—The operation is very easily performed; it is not liable to the objections which were formerly made to it, and it is in general safe. In the female, it is absolutely necessary that this operation should be performed in cases of retention of urine, from retroversio uteri, and from a cancerous disease affecting the meatus urinarius. Opening the bladder by the vagina is a very unsafe and disastrous operation in its consequences; as the urine distils into the vagina, occasioning the highest degree of excoriation, attended with dreadful suffering and constitutional irritation. It is an operation which ought never to be performed.

The next operation which I shall describe to you is that of

Puncturing the Bladder of the Rectum.

I must recall to your minds a little of the anatomy of the parts; you remember that the prostate gland bounds the bladder at the under part, that directly behind it the vasa deferentia meet, and pass down at an acute angle, the sides so nearly approaching where they first touch the prostate gland, that there is no room for the introduction of an instrument without injuring either one or the other of these tubes. The vesiculæ seminales which are situated on the outer side of the vasa deferentia are not in danger from the operation. There is a triangular space behind the prostate gland, which affords room for the instrument; and how is this space bounded? In the fore part it is bounded by the meeting of the

vasa deferentia, which forms the apex of the triangle; the sides of the triangle are formed by the vasa deferentia, which diverge from each other, passing from the prostate gland backwards; the basis of the triangle is formed by the peritoneum, which is reflected from the posterior part of the bladder to the upper part of the rectum. Taking advantage of this space of the bladder which is not covered by peritoneum, you pass the instrument which you employ for the purpose of relieving the bladder, about three-quarters of an inch behind the prostate gland, into the back of the bladder. You must not pass it directly behind the prostate, for if you do, you will castrate the patient, either on one side or on the other, as the vasa deferentia are situated close at the basis of the prostate gland. If you carry the instrument three-quarters of an inch, or even half of an inch, behind the prostate gland, the vasa deferentia will escape. No man should think of introducing the trocar directly behind the prostate gland, but at the distance of at least half an inch from it; the distance of three-quarters of an inch is better. When you pass your finger into the rectum you will feel the bladder projecting into it. It is elastic, and yields with difficulty to the pressure of the finger; you will readily feel the fluctuation. This leads you to the spot where the trocar is to be introduced; the triangular space is directly presented to the point of the instrument. This is a very easy operation, and may be had recourse to by a surgeon who consults his own ease rather than the advantage of his patient. I will describe to you the steps of the operation, and then mention the objections which may be urged against it. You introduce your finger about an inch behind the prostate gland, and then upon the upper part of the finger pass the trocar, which may be either curved or straight, to the posterior part of the bladder. When the point of the instrument rests upon the upper part of the rectum and the posterior part of the bladder, you pass the trocar into the bladder by a slight and sudden motion of the hand. As to the direction in which the trocar is to be carried, it is obliquely upwards and forward. If you were to push it through the fore part of the abdominal parietes, it would pass midway between the pubes and the navel. The place at which the point of the

instrument should penetrate, supposing it to be carried through the bladder, is half way between the umbilicus and the symphysis pubis. In this direction it will readily enter the bladder. The objections to an operation which is so easily performed are these: Although you introduce an elastic gum catheter for the purpose of allowing the urine to distil through it, some of it will trickle by the side of the instrument into the rectum, and produce a high degree of irritation. This is not the case in every instance; but I have seen a great number of instances in which the rectum has been brought into a state of severe disease in consequence of this operation. Mr. C., a surgeon of Gloucester, had a patient under his care for more than two years, who suffered under a high degree of irritation in the rectum after this operation, a sinus having formed between the bladder and the rectum; he died from the consequences of this disease. This is an objection which may be urged against puncturing the bladder in this way; and though the operation sometimes succeeds, it is, upon the whole, one which ought not to be resorted to. I went down into the country, some years ago, to see an elderly gentleman, who was labouring under retention of urine. When I arrived, the surgeon told me that he had relieved his patient by puncturing the bladder through the rectum; I said I was happy to find that his patient was relieved, and was about to go back, when he requested me to see his patient. I went into the room, where I saw a very old gentleman and upon asking him how he felt, he told me that he was greatly relieved by the operation which had been performed. I asked the surgeon the cause of the retention of urine, for which he had punctured this gentleman's bladder: and he replied, an enlargement of the prostate gland. Indeed, said I, let me see whether I can pass a catheter into this gentleman's bladder. I took a large catheter from my pocket, which I passed with the greatest ease. It was this and a great number of similar cases, which induced me to say that it is perfectly unnecessary to puncture the bladder by the rectum, or in any other way, for an enlargement of the prostate gland. You may rely upon it, that any surgeon who punctures the bladder, under such circumstances, is a particularly clumsy fellow. (A laugh.)

[The learned Professor proceeded to show the operation of puncturing the bladder by the rectum on the dead subject.]

Of the Operation of Puncturing the Bladder through the Perinæum.

This is so much like the operation for stone that I need not dwell much upon it. It consists in puncturing the bladder by the side of the prostate gland; there is no danger of injuring the peritoneum in this operation, because it does not reach the anterior part of the bladder. You make an incision in perinæo, as in the operation for stone, cutting down on the bulb of the penis, and drawing it to the patient's right side. You then carry the knife within the branch of the ischium till it reaches the prostate gland, which you push to the patient's right side. You then carry the instrument obliquely upwards into the bladder, your finger resting on the prostate gland. (Sir Astley performed the operation on the dead subject.)

There is no great difficulty in any of these operations, but let us now come to this question, whether the bladder should be punctured at all? The last operation requires a greater share of anatomica knowledge than the others; this is of course no objection to it, for no man ought to operate on the human body who has not a perfect knowledge of anatomy. The objection to it is, that it generally produces a great deal of constitutional irritation, which we ought always, if possible, to avoid. I hold that we ought to avoid all these operations, and that puncturing the bladder at all for stricture in the urethra, or enlargement of the prostate gland, is perfectly unnecessary. I will tell you why I hold this opinion, Gentlemen; for if I were to make this statement without assigning my reasons for it, I should be doing you injustice. I am aware that what I now say is not merely addressed to you, but that it will go forth to the world, and I have no hesitation in declaring my opinion, however widely that opinion may be disseminated, that I consider the operation of puncturing the bladder, with very few exceptions, entirely unnecessary. I will explain to you the grounds on which I entertain this opinion. I was lecturing here one evening, when one of Mr. Chandler's dressers came to me, and requested me to see a man who was labouring under

retention of urine in this hospital. I went immediately, and found that he was suffering under retention of urine, from the use of a caustic bougie. I desired him to try to make water, and while he was trying, I put my finger on the perinæum, and distinctly felt the water rush against the stricture, which was just opposite the arch of the pubes, the urethra having become enlarged behind the stricture. I directed him to be carried into the operating theatre, and just making an incision under the symphysis pubis, I desired him to try to make water. While he was trying, the urethra being very much distended with urine, I opened it, and the urine flowed. He was put to bed without undergoing any other operation; the inflammation produced by the caustic bougie subsided, and common bougies were afterwards used. The man was completely relieved by the operation, and this is all I have done since in cases of accumulation of urine in the bladder. I desire the patient to draw up his legs as if he was going to be operated upon for stone, and I tell him that I am just going to make a small incision, which will not expose him to any risk. If I find a difficulty on account of the stricture being situated very near the apex of the prostate gland, on opening the urethra I introduce an instrument in the way in which many of you saw me perform the operation a few days ago. Instead of carrying the point of the instrument towards the bladder, I direct it outwards, so as to bring the urethra into the perinæum, and making a cut behind the point of the instrument, I introduce a probe and carry it to the stricture. If the incision is not sufficient, I carry the opening still further, introduce a director, and upon it a knife, with which I divide the membranous portion of the urethra. The result is, that the urine is passed by the perinæum, and the bladder is relieved from the accumulated load of urine without being in the slightest degree injured. It is said that this is an operation attended with great difficulty. I will acknowledge that there is some difficulty in it, if a man is not quite clear as to the situation of the different parts of the urethra; but this is what every surgeon ought to be perfectly acquainted with. Suppose I wished to cut into the membranous portion of the urethra, where should I make the incision so as to be quite sure of cutting at once into it,

even without the introduction of a staff? Directly under the symphysis pubis. A few days ago I had occasion to perform the operation which I am now describing. In going round the wards I was told that there was a man with a very bad stricture; I desired that he might be carried into the theatre. I found it impossible to introduce an instrument into his bladder; I consequently made an incision on the stricture. This incision led to the discovery of some very solid bodies, which proved to be two calculi directly behind the stricture. I first introduced a probe, and then a director, which I passed into the bladder. In order to overcome the stricture, I did not divide it with the knife, but passing a catheter down to the stricture, I forced the stricture with the catheter, carried the instrument on through the wound into the bladder, and left it there. Now was this man's life endangered by this operation? Was he less likely to recover? See him, Gentlemen, and judge for yourselves; he was completely relieved by the operation, and he is now doing extremely well. It may be supposed that this operation is a little bantling of my own, and that I am therefore desirous that others should favour it. No, Gentlemen, these are not my sentiments. I am anxiousonly that you should adopt that operation which is best calculated for the patient's safety, and your own reputation. If you can relieve a patient from an accumulated load of urine, by an operation which leaves his bladder in a sound state, I certainly think you should prefer that operation. Some, at least, of the surgeons of these hospitals concur with me in this opinion. Mr. Green and Mr. Key have performed this operation repeatedly. The other day, indeed, when the man was placed on the table, and I hesitated whether I should puncture the bladder above the pubes, for I think it right occasionally to vary our operations for the benefit of the students, where it can be done with safety to the patient, Mr. Key interposed, and said to me, "Oh, no! do not quit your operation, of opening the urethra." This is certainly the operation which I advise you to perform; and if you feel any difficulty in performing it, go, Gentlemen, to the dissecting room, and study till you have surmounted that difficulty.

The learned Professor concluded, by showing on the dead subject, the mode of extracting

small stones from the bladder, without the use of cutting instruments. He exhibited to the class the forceps invented for this purpose, at his own suggestion, by Mr. Weiss of the Strand, to whose ingenuity and skill he paid a well-merited tribute. With this instrument, Sir Astley extracted no fewer than eighty-four calculi from the bladder of the Rev. Mr. B. of Barnwell, in Cambridgeshire. He had since extracted thirty calculi from another person. Some years since he performed the operation of lithotomy on a young man at Wapping. A few months ago this person called upon him, and said that he was sure he had a stone in his bladder. The learned Professor said that if it was a small one he could extract it from him without cutting, and he succeeded in immediately extracting a stone from the bladder. The same patient called again upon him shortly after, and said he was convinced there was another stone in his bladder. No stone could be found, but the forceps were expanded on being withdrawn, so as to stretch the passage. The patient was recommended to resist the inclination to make water for a considerable time; and the first time he made water he passed three or four small calculi. Sir Astley observed, that by regulating the screw of this instrument, so as to increase its force, even large triple phosphates might be broken and removed from the bladder.

BARTHOLOMEW'S HOSPITAL.

THE following case, we are compelled to say, does not add to the chirurgical reputation of this Establishment, and forms a complete antithesis to the admirable Lecture of Sir A. Cooper on retention of urine, which we have given above. The theory of Sir A. Cooper, it will be seen, is widely opposed to the practice of Sir Ludford Harvey: in the present instance it appears that nature had formed the opening into the urethra which Sir A. so strongly recommends to be made by art; but the efforts of nature Sir Ludford seems to treat with contempt; it is possible, however, that the learned Knight has discovered some new principle in hydraulics, which tends to prove that water contained in cellular membrane, contrary to its heretofore immutable law, instead of obstinately gravitating, will proudly ascend to the most elevated parts of the body. Hence Sir Ludford punctured the bladder above the pubes, anticipating, of course, that the urine which was extrava-

sated under the integuments at the inside of the thighs, and in the cellular membrane of the scrotum, would ascend to the opening made above the pubes, and there gush forth in a full and limpid torrent.

The affairs of this hospital are altogether interesting, if not gratifying; and we have in the Lectures of Mr. Abernethy (which we shall certainly publish) matter that will be found highly amusing and instructive. In the medical and surgical practice of this hospital, too, much valuable information may be culled, but principally of the negative kind, and showing what ought to be avoided, rather than what ought to be performed. We must not, however, be too severe in our strictures, for we understand that diseases perfectly unique are met with here, which have neither been seen nor dreamt of elsewhere. As the complaints are new, experience cannot have dictated the propriety of any particular practice; consequently, the best surgeons in England would be at a loss to determine what course they would adopt, if while operating they should happen to discover *an inguinal* hernia impudently occupying its occasional neighbour, an enlarged *inguinal gland.*

On Tuesday, March 16, 1824, George Roberts, aged 70 years, was admitted into this hospital suffering from retention of urine, with extravasation into the cellular substance of the scrotum. He states, that about a week previous to his admission into the hospital, finding a difficulty in voiding his urine, he applied to the surgeon of his parish, (Islington,) who gave him some opening medicine; the next morning, in consequence of not having passed any water, the medical man attempted to pass a catheter, but in this he was unable to succeed. The patient continued in this state (occasionally passing a few drops of urine tinged with blood) till he was brought to the hospital. The urethra had then become ruptured, and extravasation of urine had taken place. After some unsuccessful attempts to pass a catheter by Sir Ludford Harvey, the patient was carried into the theatre, and the operation of puncturing the bladder above the pubes performed by Sir Ludford Harvey. A trocar having been passed into the bladder, through the linea alba, the stile was withdrawn, and the urine allowed to escape. An elastic catheter was then introduced into the bladder, through the canula of the trocar, and the latter was withdrawn. The man experienced great relief after the operation.

Monday, the 22d, he was much better, but complained of pain in the head; his tongue was dry and brown; his bowels had been opened by a powder composed of calomel and jalap; he had a troublesome cough, for which he took some common acid linctus. The swelling of the scrotum, penis

and perinæum, arising from the escape of urine, was rather diminished. There was, however, a good deal of inflammation around these parts. The catheter was still in the bladder; around the puncture a slight degree of inflammation had been produced, and at the edge, next the pubes, suppuration had taken place; no urine had passed by the natural channel, but some had escaped by the sides of the catheter; this was of a dark colour and tinged with blood: he complains of great weakness, and was ordered the rice and milk diet.

Tuesday, March 23d.—The swollen parts have assumed a blackish hue, and a linseed-meal poultice is applied; his tongue is dry, and covered with a brown fur; pulse quick, the cough still troublesome. The catheter had been removed, and a fresh one introduced.

Wednesday.—The swelling is very much abated; the colour of the parts is not so dark as yesterday; he seems much better; the urine which passes by the catheter is in appearance bloody; none has yet passed by the natural outlet.

Thursday.—Tongue furred, and rather brown.—Pulse 115, and weak.—Bowels confined.—Tenderness at the lower part of the abdomen.—Scrotum sloughing; the parts are covered by a linseed poultice—is ordered

Brandy ℥ vi.
Strong broth.

℞ Hydr. submur, gr. i.
Pulv. Jalap. gr. v. statim.

The symptoms above detailed continued to grow more and more severe, and particularly the tenderness of the abdomen, until Wednesday, March 31st, when he expired at a quarter of an hour before two o'clock, A. M.

A precious specimen this of Hospital Surgery!

MIDDLESEX HOSPITAL.

Case of Scrotal Hernia.

Wm. Cassemy, a negro, ætat. 40, was brought to the hospital about eight o'clock on Monday last (15th March) with a scrotal hernia of the left side, of unusually large dimensions, the scrotum being distended almost to the size of a large pig's bladder. The hernia had existed twelve years, and had constantly required, and till within a few months had received, the protection of a truss. In the present instance, it had been down for two hours previous to his admission. After some attempts had been made to reduce it, venesection and the warm bath were resorted to, which produced syncope and vomiting, but did not appear to aid the subsequent attempts of reduction by the taxis. The tumour still remained tense, hard, and inelastic;—was so tightly embraced and narrow at its cervix, and expanded so suddenly from this

point, that all further attempts must have been totally unavailing and destructive to the patient.

Operation.

The assisting surgeon, pinching up the integuments over the neck of the sac, the operator divided that part with the scalpel, when it was found that an incision had been accomplished, which extend obliquely across the neck of the sac, and directly over the ring. The fascia superficialis was now raised by the forceps, and dissected back; other layers were lifted in succession, by passing the directory under them. At length, the upper pillar of the ring was made distinct; under which, and of course between it and the proper neck of the sac, the director was passed. The probe-pointed bistoury, was then passed along the groove of the director, and the edge of the pillar cut across. The finger was then introduced, and the protruded portion of intestine returned to its proper cavity, which was easily effected, and afforded instant relief. As the hernial sac was not divided, the state of the intestine could not, of course, be ascertained. The edges of the wound were then brought together and secured by a suture, with the usual dressings and bandages. On his removing from the table he had a shivering fit, which lasted about ten minutes.

A draught of the Mist: Camphoræ was given him, and an enema shortly afterwards, and

℞: Extracti Colocynthidis Compositi gr. viij.

Hydrargyri Submuriatis gr. jj. fiant pilulæ duæ tertiis horis donec alvus responderet sumendæ.

16. Has had copious alvine evacuations during the night—Pulse 104, and weak—Pain and tension of the abdomen, with nausea and vomiting—Skin moist—Tongue a little furred—Thirsty and restless.

Hirudines xx. abdomini, postea fotus assiduè applicandos.

A few of the pills were again given him.

17. Has had several mucous evacuations, mixed with blood, during the night, and fore part of the day—Pulse quicker than yesterday, and more feeble; vomiting still continues, with great anxiety and dejection of mind. The wound, however, looks extremely well, and the tenderness of the abdomen is in some degree mitigated.

Imponatur emp: Cantharidis abdomini.

℞: Carbonatis ammoniæ, gr. ii. Sp. ætheris sulphurici, ʒ ss.
Tincturæ opii. m. v.
Confectionis aromaticæ, gr. x.
Misturæ Camphoræ, ℥ ss. fiat haustus tertiis horis sumendus.

The stomach rejected the first draught; but retained the second, and in the evening

the patient was more composed and comfortable.

18. Has vomited a quantity of stercoraceous matter during the night. Pulse, 104, and rather weak. Skin moist; bowels rather relaxed; tongue tolerably clean. The state of the abdomen could not well be ascertained on account of the blister. The incision has nearly united by adhesion, and looks extremely well. The vomiting during the morning has been almost incessant, with great dejection of spirits, restlessness, and anxiety.

℞: Haustus Tartratis Sodæ, ℥ ii*.
Tincturæ Zingiberis, ʒ ss.
Tincturæ opii. m. v. 4 tis horis.

In the evening another blister was applied over the epigastric region and abdomen; the former not having risen sufficiently.—Pulse 116, and rather fuller; has not vomited the last medicine. A laxative powder of calomel and rhubarb was given him, which procured one stool during the night.

19. Pulse 114, weak and inelastic; skin moist; tongue a little furred. A dose of castor oil was given him, and the draughts were continued. In the evening he was very restless and uneasy. Pulse 130, weak and wiry, with a great tenderness over the lower part of the abdomen, to which a blister was applied. His alvine evacuations (of which there were several) were dark coloured, liquid, and offensive. Skin moist*, and tongue covered with a whitish fur. The patient at this period was excessively thirsty, and swallowed liquids with great avidity. Late in the evening the stomach rejected some weak broth which had been given him, stercoraceous vomiting soon followed, which during the night became almost incessant, and towards morning a soporose or comatose state succeeded. Died about nine o'clock a. m., the 20th ult.

The body was examined about twenty-eight hours after death in the presence of several pupils. On laying open the abdomen, no particular appearances were observed, but on following the course of the intestines, from the stomach downwards, several morbid changes presented themselves. The stomach itself appeared to be quite healthy. About the centre of the jejunum, there was a portion of the intestines of a dark livid hue, which however, was not lacerable, although its colour indicated the presence of gangrene. Continued from the jejunum, there was a small band of inflamma-

* This is a draught made with carbonate of soda and tartaric acid, and drank whilst in the effervescing state.

* This was the case throughout: but whether the skins of negroes are such nice indices as those of Europeans, we do not know. The fact, however, in the present instance, was as above stated.

tion, extending to about the middle of the ileum, where it was of a deeper colour than the former. There was a slight blush on the peritoneum lining the lower part of the abdominal muscles. Although the sac was very much thickened by the constant wearing of a truss, it did not exhibit any signs of recent inflammation, and from the large size of its cervix no stricture could have existed there. The glands of the mesentery were slightly enlarged; the large intestines were quite natural.

In addition to the above the following remarks may be made:—

1. That from the immense size of the hernial sac, the surgeon was justified in not dividing it, or a very troublesome portion of the contents of the abdomen might have protruded through the opening.

2. The stricture existed at the external abdominal ring, and no where else.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

To the Editor of THE LANCET.

SIR,—As your paper has become the vehicle for much satire against the College of Surgeons in Ireland, and those connected with it, I trust its columns will be open to the observations of such as may endeavour to defend the character of that institution, and maintain the reputation of its members.

Had "Erinensis" confined his remarks to the public acts of the College; had he not descended to that mean slander and personal invective, which always supply the want of reason, argument, and truth, but which seem so well suited to his nature and disposition; he would have still met with that silent contempt with which he has been hitherto treated; he might have still indulged himself in his unjust censoriousness—he might still have satiated his malice, by giving vent to feelings that are by no means enviable; but rendered still more detestable by the anonymous source from which they have emanated

Let not your correspondent suppose, that I am now about to advocate the laws, enactments, and decrees of the College—these are the acts of a public institution, and are, therefore, open to public inquiry. To the result of any candid investigation its conductors may look forward with the most pleasing confidence. They can boast, that they have fostered with a tender and prudent hand that infant institution, the humble birth of which "Erinensis" has taken such pains to describe: and it is their pride that they have brought it to that pre-eminent maturity with which it now shines in the professional world. Little did he think, that when he described this institution to have been, as late as the year 1806, "confined to one apartment," where "the sun's rays

were entangled in the meshes of inviolable cobwebs, or excluded by the impenetrable dust of the windows," little did he suspect, when he depicted this institution as "the scene of matchless misery," as "nurtured in the lap of filth," that he conferred the highest compliment on the management of its conductors, whose prudence, in the short space of a few years, has so far elevated it from its former humble and degraded situation, that it "now basks in the sunshine of Irish popularity," that "it now stands the pride of Irish surgery;" that "every thing now wears the look of prosperity and comfort."

He clearly demonstrates what little scope has been left for his satirical spirit to direct its genius against the College, when he is compelled to ridicule the clerk of that institution, whose "snowy temples," as well as the respectable station he once held in life, should have afforded him at least some slight protection. But the anonymous defamer, who endangers not responsibility, seldom pays respect to age or virtue. Before I conclude my observations on the remarks of your correspondent concerning this individual, I must most solemnly protest against his attempt to intermingle the subject of political and religious opinion with the consideration of a professional establishment. Party spirit as yet has remained dormant in this institution; as yet the torch of discord has not spread desolation through its walls, and disunion among its members; and why does "Erinensis" interrupt, by his unfair insinuations, that tranquillity and harmony which every one should promote? and why, with renewed vigour, in his second letter, does he attribute the preference, which one of our distinguished professors gives to English over French surgery, to that gentleman's detestation of popery? By that assertion he evinced the grossest ignorance of the liberality of that gentleman's sentiments, and gave an additional proof of the slight regard which, during his correspondence, he has paid to candour and to truth.

With an accuracy of detail, which would have done credit to his abilities if more usefully employed, he describes the interior of the college, and in perfect accordance with the unjust spirit of criticism, so evidently manifested throughout the whole of his writings, subjects each of its parts to ridicule and censure. The library, the museum, nay, the whole college itself, seem to prostrate themselves before his talismanic pen; and then hurrying you into the lecture-room with an irresistible stream of language undeserving the name of satire, he describes a "scene of unphilosophical tumult," which had no existence, except in his own imagination.

I had intended to have made some observations on "Erinensis'" second letter, but I

find I have already exceeded the limits which I had prescribed for myself. Suffice it to say, that he has in it fully glutted his appetite for personality;—in it the persons and manners of the best members of our profession have met with no protection. Men have been assailed, whose station in society, whose rank in their profession, should have shielded them from the dark blows of "Erinensis"—men, whose unsuspecting acquaintance is probably enjoyed by their assailant, who worming himself into their confidence for the better accomplishment of his deep design, delineates their characters with a pencil of injustice and impunity, blazing forth in glowing colours their foibles to the world, and casting a shade over the good qualities which candour demands him to display.

I trust the pages of your valuable work will no longer be sullied by the abusive ridicule of "Erinensis." Let him turn those talents, with which nature has in some degree gifted him, to a more useful and more honourable channel—and let him not disseminate, among the students and members of our profession sentiments that can only tend to damp the ardour of industry, or afford a pretext to indolence. If he be advanced in his profession, let him endeavour to practise it with reputation to himself and utility to others. Let his example be as a bright beacon to illumine the path, and cheer the prospects of the student; and, if he be, as yet, ranked among those whose youthful expectations look forward with pleasing hope to professional advancement, let him not repress that noble spirit of emulation, which glows within the breasts of many of his associates; but let him be assured that the doors of this "mansion of corporate exclusion" shall never be shut to the calls of industry and perseverance; let him remember that

Labor omnia vincit improbus.

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ROYAL INSTITUTE OF FRANCE.

Sitting of the 19th Jan. 1824.

DR. RUNGES, professor at the University of Berlin, read a memoir on a new method of detecting the narcotic principle of the atropa belladonna, hyoscyamus niger, and datura stramonium, in cases of poisoning by those plants. These substances, applied to the eye, have the property of dilating the pupil, and Dr. Runges, by examining the extracts and pharmaceutical preparations from other medicinal plants, as well as a great number of substances derived from the animal kingdom, has ascertained that the property of dilating the pupil is peculiar to the above-mentioned plants. His method consists in boiling the stomach or intestines of the animal poisoned by these vegetable substances, evaporating the aqueous solution to

the consistence of an extract, and applying it with a camel-hair pencil to the eye of an animal. He prefers performing this experiment on the cat, because the form of its pupil affords a better opportunity of witnessing this phenomenon.

He subjected the blood and urine of animals poisoned to the same process, but he could only demonstrate the presence of the narcotic principle in the urine. The property of dilating the pupil, peculiar to these plants, depends on a chemical principle, each of them containing an organic alcaline substance, which can neutralise acids, and form with them salts capable of crystallization, and possessing very powerful properties. This chemical principle has been named *koromegine*, from its power of dilating the pupil.—*Revue Médicale, Feb.*

French writers are notorious for the havoc which they uniformly make with the names of foreigners. The *Revue Médicale* for February, in copying from *The Lancet* the substance of our account of Mr. Jukes's experiment at the Theatre in the Borough, has the following passage:—

"*Monsieur Cooper* afterwards swallowed a solution of liquorice, in the presence of his pupils, and discharged the whole of it from his stomach by means of the instrument."

We once read a very sentimental French novel, in which the scene was laid in England, where the hero of the tale was Lord *Puddingfield*, and the amiable heroine a Miss *Vagtail*. We have at this moment a medical journal before us, in which we could scarcely recognise an old friend under the malicious designation of Sir *William Wizard*. Who could have suspected that any body would ever have mistaken Sir William Blizard for a *conjuror?*

PROPERTIES AND MEDICAL USES OF PRUSSIC ACID.

PRUSSIAN BLUE is a mineral substance which Bergmann first ascertained to be composed of iron, and a particular acid which gave it its blue colour.—Guyton Morveau called this acid *Prussic;* Scheele investigated its nature in an imperfect manner; but M. Gay-Lussac is the first who obtained it in a state of purity, and pointed out the elements of which it is composed. The result of his investigations is, that the base of this acid is a compound of azote and carbon, which M. Gay-Lussac calls cyanogen, the acidifying principle of which is hydrogen, whence arises the denomination which he has given it of hydrocyanic acid. The preparation of this acid is a process attended with considerable difficulty, and it is also difficult to keep it, as it is very rapidly decomposed.—Left to itself in a close vessel, it is sometimes decomposed in less than an hour; it can seldom be kept beyond a fortnight.

When it is in a state of purity, its effects are terrible; it is the most violent poison which is yet known. M. Magendie states, as the result of his experiments, that on a drop of pure Prussic acid being conveyed into the throat of a strong dog, the animal falls down dead and stiff after two or three hurried inspirations. A particle of the acid applied to the eye produces equally sudden death. A drop of the acid mixed with a few drops of alcohol, and injected into the jugular vein of an animal, kills it instantly, as if it were struck with lightning. In animals poisoned in this manner, by Prussic acid, we can scarcely discover any traces of irritability in the muscles a few instants after their death. A remarkable peculiarity in this poison is, that it leaves no other traces by which it can be detected than a strong smell of bitter almonds in the dead body; this smell is characteristic, and lasts for a considerable time.

Pure Prussic acid produces the same effects on man as upon animals. Even its vapour should be carefully avoided. If it is inhaled, it occasions pain in the chest, and a sense of oppression which frequently lasts for several hours. Properly diluted, its effect on certain diseases is, to lessen irritability in particular organs. In order to turn this last property to advantage, M. Magendie tried the hydrocyanic acid in nervous and spasmodic diseases, and especially in phthisis. He observed that the constant effect of this acid, given in small doses, frequently repeated, was to lessen the cough, moderate and facilitate expectoration, and to procure sleep during the night without exciting colliquative sweats. A great number of observations induced him to believe this acid would furnish a complete remedy for phthisis in its incipient stage. The Prussic acid which M. Magendie uses for medicinal purposes is composed of six parts water and one of pure Prussic acid. The following is his formula:—

Infusion of ivy, 2 ounces.

Medicinal Prussic acid, 15 drops.

Syrup, 1 ounce.

A tea-spoonful to be taken every third hour.

Prussic acid has been used with advantage in Italy and Germany, in cancer of the matrix. It has also been used externally for ringworm and cutaneous diseases. This acid may be considered as one of the most powerful sedatives we possess, and in this respect may supply the place of opium, and other anti-spasmodic medicines.

M. Heller has recently read a paper to the Royal Society of Medicine at Paris; from which it appears that, undeterred by the terrible effects of this substance, he has employed in it many cases with extraordinary boldness. He has used a preparation consisting of one part of hydrocyanic acid, com-

bined with three parts of water. It might be supposed that the effects of this preparation would be much more powerful than those produced by M. Magendie's mixture. However, M. Heller has gradually increased the dose to his patients until some of them have taken 50 or 60 drops of this mixture, that is, from 12 to 15 drops of pure acid, in the course of 24 hours. It is evident from this fact, that the properties of the acid must undergo a great change by its mixture with water; it is no longer the same substance; it is a different combination, and there is probably more Prussic acid in a single drop in its pure state than in ten drops diluted with water. However this may be, the following are the results of M. Heller's observations.

This physician has never cured a case of pulmonary consumption; but he assures us that many of his phthisical patients, afflicted with nervous spasms, wandering pains, or insomnolence, have obtained much more relief from the Prussic acid than from opium.

In pneumonia, and acute or chronic pleuritis, in pulmonary catarrh, &c., the Prussic acid calms the cough and irritation, and may therefore hasten the cure; but it cannot supply the place of bleeding, and the antiphlogistic regimen, which forms the foundation of the treatment of these diseases. In these cases M. Heller gives the following prescription:—

Hydrocyanic acid, in the proportion of one drop of acid to three drops of water.

Syrup of orgeat, 1 ounce.

Distilled water, 2 ounces.

A tea-spoonful to be taken every quarter of an hour.

He increases the dose of the acid from two to five drops, in the same potion, for cases of asthma. The result is, that at the end of 20 or 30 minutes the symptoms are relieved, and the respiration becomes more easy. By continuing this plan, the paroxysms of asthma become shorter, and return at longer intervals;—but M. Heller confesses that he has never radically cured a case of asthma by the Prussic acid. Hæmoptysis has been sensibly moderated, and sometimes arrested, by the hydrocyanic acid, in cases where no hemorrhage was manifest. In aneurism of the heart, and of the large vessels, the pulsations of the heart have been diminished in force and frequency by the use of Prussic acid; he has given at first 10 drops in the 24 hours, and has gradually increased it to 60 drops. M. Heller has not cured any case of aneurism; but he thinks he has prolonged the lives of many patients labouring under that disease by this medicine.—*Gazette de Santé.*

LUSUS NATURÆ.

In the month of January, 1820, says J. Barzellotti (an Italian physiologist) a cook at

Pisa, in opening several pigeons, discovered that one of them had two hearts and two livers. No peculiarity had been observed in this pigeon which could have led to the suspicion of any unusual phenomenon. The hearts were each of the same size, but somewhat less than those of the other pigeons. The two livers were not of the same size; the right being larger than the left. About 50 years ago, a serpent with two heads was found in the neighbourhood of Pisa; it was examined by Redi, who was then principal physician to the Grand Duke of Tuscany. It had, besides these two heads, two œsophagi, two stomachs, and a single intestine. It had two pericardia, each of which contained a heart, the left being smaller than the right. It had two pair of lungs, two brains, &c. Signor Mascagni has in his possession a human fœtus having two heads, a double thorax, four hands, and consequently two brains, two œsophagi, four pair of lungs, two hearts, two stomachs, two livers, and two intestines; it had only one rectum.—*Bulletin des Sciences Médicales, February*, 1824.

BALSAM OF COPAIBA.

"If there is any thing certain in therapeutics," says Dr. Miquel, "it is the action of the balsam of copaiba in large doses, in cases of gonorrhœa; the observations of MM. Ribes and Delpech* established this fact beyond all doubt. All the practitioners whom I have consulted on this subject are unanimous in their opinion; nevertheless it is stated in an article in the *Journal Universel*, "that M. Lallemand has always found it increase the inflammation, which it was necessary to subdue by local bleeding; that it often produces pain in the epigastric region, colic, diarrhœa, a burning heat of the skin, head-ach, with flushings in the face, dryness in the mouth, and redness of the lips and tongue. Undoubtedly, the balsam of copaiba produces some of these effects, though I have never seen it occasion head-ach. Every body knows that it is purgative; but the colic and diarrhœa may be prevented or checked by adding a small quantity of laudanum; and I will ask whether it is not better for a patient to submit to a little purging, and a temporary redness of the tongue and lips, than to suffer the inconveniences of a gonorrhœa, the

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* The following is the prescription of Professor Delpech, which he has found constantly successful:—

Of Peppermint water, Orange-flower-water, Syrup of Lemons, Balsam of Copaiba — each one ounce.
Sulphuric Acid, 1 drachm.
Gum tragacanth, — a sufficient quantity.

A table-spoonful to be taken morning and evening; if violent purging or colic is produced, 20 drops of laudanum should be added.

pain of which is often intense, in spite of the application of leeches to the perinæum, and corpora cavernosa. so much relied upon by M. Lallemand?—*Gazette de Santé, March, 15.*

There have been no fewer than 370 suicides in Paris and its suburbs during the last year 256 men, 114 women. In the month of January there were 17; in February, 22; in March, 41; April, 41; May, 33; June, 40; July, 33; August, 43; September, 30; October, 28; November, 16; December, 26. —*Gazette de Santé.*

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